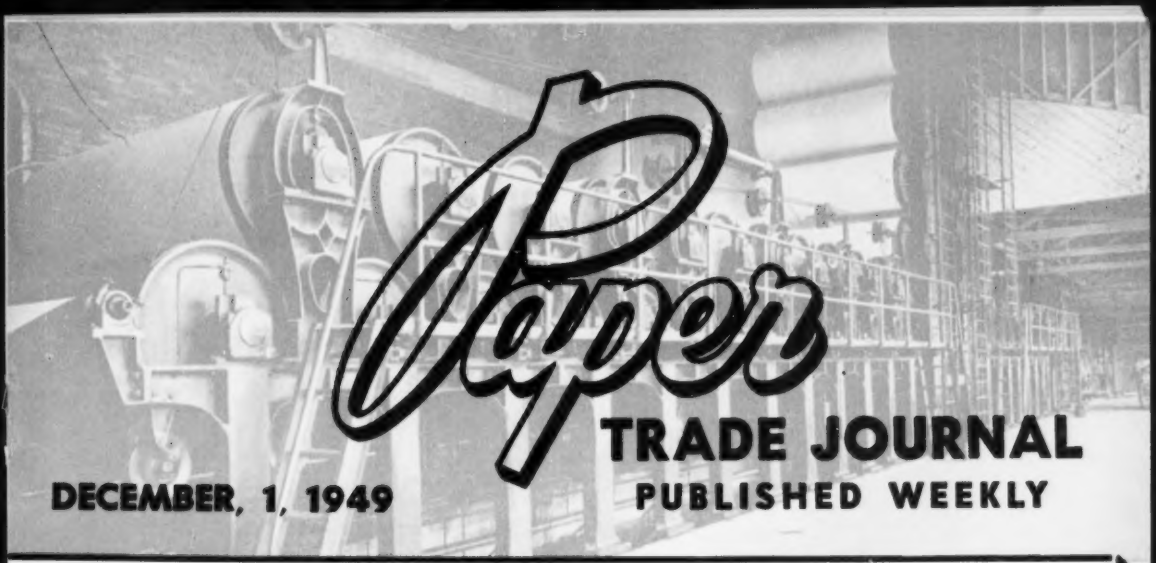

WOOD PULP

G

Established 1886

"Present opportunities are not to be neglected."
VOLTAIRE

New market factors, technical advances, unusual purchasing opportunities constitute a continuously changing scene.

Over sixty years of specialization and service to the pulp and paper industry qualify us to give you a constantly up-to-the-minute check on the pulp picture.

Be it Bleached or Unbleached, Softwood or Hardwood, Sulphite, Sulphate, Soda or Groundwood, our facilities are gladly at your disposal.

GOTTESMAN & COMPANY
— INCORPORATED —
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EUROPEAN OFFICES: Birger Jarlsgatan 8, Stockholm, Sweden

NO MORE EFFECT THAN A *Feather* ON THE ROCK OF GIBRALTAR.....

You can imagine what effect a feather would have in deflecting the Rock of Gibraltar. The rolls in a Downingtown Smoothing Press DO NOT HAVE ANY CROWN, yet comparatively they are as non-deflecting as the "Rock," under the feather. This means that no matter how much, or how little, you weight the roll at the ends, the nip pressure is always uniform across the entire sheet, regardless of sheet caliper, thus minimizing blowing, crushing and checking, etc.

Should you need a smoother sheet and a higher finish to meet today's competitive market, the Downingtown Smoothing Press must receive serious consideration, as it is a salient factor in the solution of your problem.

Downingtown Smoothing Press Rolls are mounted in anti-friction bearings and, when necessary, a rope carrier is provided to feed the sheet into the rolls.

May one of our engineers call to discuss the improvement of the quality of your sheet with a Downingtown Smoothing Press; also to explain how, without crown, uniform nip pressures are assured at all loadings. Write us.

DOWNINGTOWN MANUFACTURING COMPANY

DOWNINGTOWN, PA.

DESIGNERS AND BUILDERS OF PAPER MAKING MACHINERY SINCE 1880

SAVE TIME!

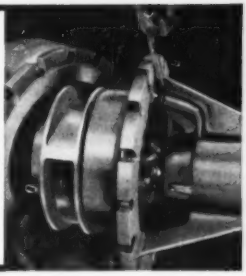
Remove Rotating Element in 5 Minutes!

"PW" PAPER STOCK PUMP

Only 2 Steps

1. LIFT OUT BOLT ASSEMBLIES! Just loosen bolts and simply lift complete bolt assembly from slot. Nut, bolt and washers still connected for quick bolt reassembly. Maintenance downtime is cut to a minimum!

2. SWING OUT ROTATING ELEMENT . . . without effort! Disassemble in five minutes without disturbing suction or discharge piping. Only five main parts subject to wear . . . with each part quickly and easily accessible. "PW" pump can be *Texrope* V-belt or direct drive.



SINCE AUGUST, 1947, the "PW" pump above has been handling over 4% consistence at 2000 gpm in the beater room basement of the Wausau Paper Mill company, Brokaw, Wisconsin. "Only minimum maintenance has been required during this period," according to D. L. Calkins, plant engineer.

The "PW" pump is specifically designed with heavy-duty shaft and bearings to handle high consistence pulps. It pumps as high as 8% consistence when used with *Hi-Density* Feeder, a multiple vane assembly that moves pulp into pump suction.

Parts inventories can be cut as much as 70% because comparable size units of different ratings have interchangeable parts.

Available in eight sizes with capacity range from 175 to 10,000 gpm—heads to 140 ft. Iron, *Ni-Resist* alloy or stainless steel parts carried in stock. Special materials to suit abrasive or corrosive applications.

For more details, call your A-C Sales Office, or write for Bulletin 08B7112.

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MILWAUKEE, WIS.

A-2889

MOTORS

CENTRIFUGAL PUMPS

TEXROPE V-BELT DRIVES

ROTARY KILNS

HI-DENSITY FEEDER

STREAMBARKER

AND OTHER EQUIPMENT FOR PAPER MAKING . . .

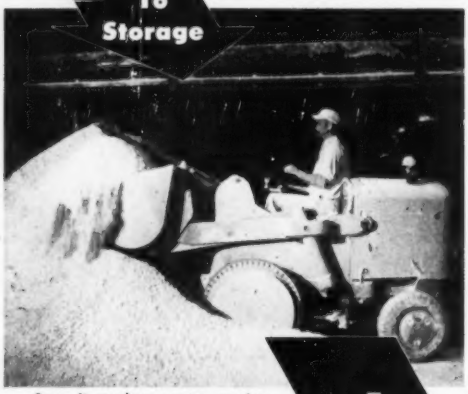
Texrope, Hi-Density and *Streambarker* are Allis-Chalmers trademarks.

ALLIS-CHALMERS

How PAYLOADERS Solved a Complex Material Handling Problem

. . . at St. Regis Paper Company

Saves 24 manhours per car unloading bulk clay.



Saves ½ manhour per ton moving clay from storage to mixer, 138 feet distant.

THE PROBLEM:

To speed the unloading of 2 to 3 box cars of bulk clay and salt cake daily . . . reduce the time and manhours required on a major handling procedure . . . load clay into hoppers . . . transport materials from stockpiles and feed them to mixer . . . operate beneath low headroom . . . eliminate outmoded manual handling operations . . . perform maintenance and clean-up operations . . . load dirt and refuse into dump trucks.

THE SOLUTION:

Slow, back-breaking hand shoveling and wrestling with hand buggies are "out" at St. Regis' Kalamazoo plant, and both management and labor are glad of it. Two HA Payloaders now do the "bull-work"—faster, easier and cheaper. One Payloader unloads and delivers to a hopper two and three carloads of bulk clay a day, in half the time formerly required and at a saving of 24 man hours per car. Another one moves clay from stockpiles to mixer — picks up its loads, carries 138 feet and dumps directly into the mixer at a saving of 1/2 manhour per ton over the former method. These Payloaders also unload salt cake from cars and are regularly called upon to perform other material handling work and many odd jobs in and around the plant.

It will pay you, too, to find out how Payloaders can cut production costs. Payloaders are unique in name, in design and in proven performance with a combination of power, maneuverability and versatility that can save time, labor and costs on so many bulk-handling jobs. The Frank G. Hough Co., 747 Sunnyside Avenue, Libertyville, Illinois.

Job Study No. 15 is available covering the complete analysis of St. Regis Paper Company's use of Payloaders. Write for your copy — it's free.

HOUGH PAYLOADER

Manufactured by THE FRANK G. HOUGH CO.

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EVERY THURSDAY
by
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MEMBER

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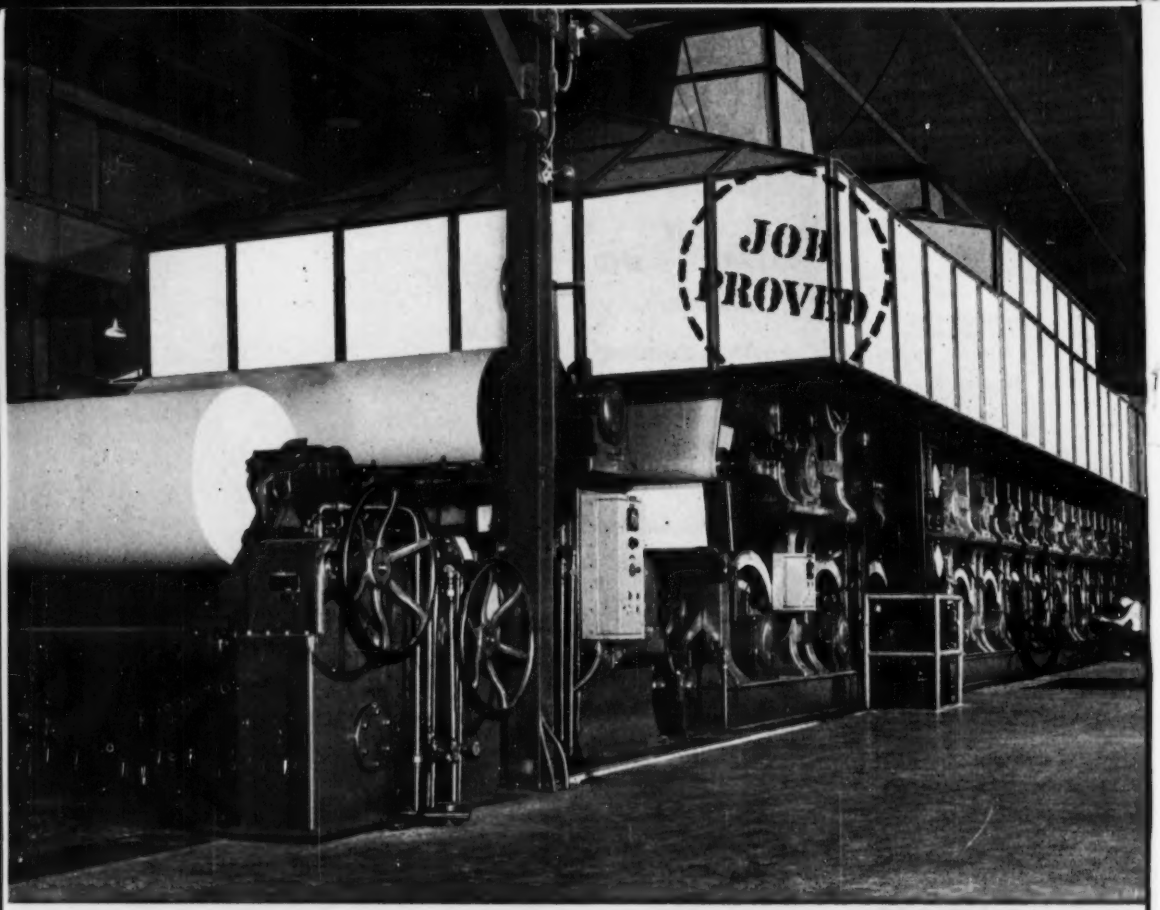


BEARINGS LAST 8 TIMES LONGER

Sun Grease Eliminates Frequent Bearing Failures in Papermaking Machines

A paper mill had trouble with the felt-roll roller bearings on one of its machines. The lubricating greases oxidized and formed heavy sludge deposits. Bearings never lasted more than three months before they had to be cleaned out, repacked, or replaced. Not only did this add heavily to costs, but poor lubrication caused power losses.

Sun engineers were consulted, and a "Job Proved" Sun Roller Bearing Grease was put to work. That was two years ago. Since then, no bearings have had to be replaced because of inadequate lubrication. In fact, a recent inspection showed all of them in such good condition that even the customary cleaning was not necessary.

This is but one case history among many which show the advantages to be gained from use of Sun "Job Proved" Products. For information about how they can help you, get in touch with the nearest Sun Office. The services of a Sun Engineer are available without obligation.

SUN OIL COMPANY • ***Philadelphia 3, Pa.***
In Canada: Sun Oil Company, Ltd.
Toronto and Montreal

SUN PETROLEUM PRODUCTS

"JOB PROVED" IN EVERY INDUSTRY

SUNOCO

Paper TRADE JOURNAL

TRENDS

Office of the PAPER TRADE JOURNAL,
Wednesday, November 30, 1949.

October Production Soars

Paper and paperboard production for October climbed for the industry's high of March, 1948, at 1,927,000 tons, and finished with 1,920,000 tons (estimated); but a little less than the other high of October, 1948, at 1,925,000 tons with an equal number of working days. Production ratio for the month was at 98.0 percent of potential capacity.

In September, the APPA reports, production ran ahead of basic demand (for consumption), indicating that inventories were rebuilding in the hands of merchants, converters and consumers for the first time since March, 1949.

Figures for the week ended November 19 plus current market information indicate that both production and demand are at high peak with order backlogs growing and paper and paperboard mills operating close to capacity.

Industry leaders envisage the year's production as close to 20 million tons, approximately 10 percent behind 1948's record of 22,048,766 tons.

National Business Conditions

Current bulletin of the Federal Reserve System on general business and financial conditions in the United States — based on statistics for October and the first half of November — states that output and employment at factories and mines decreased in October but gained in the latter part of November. New construction activity was maintained at a high rate. Department store sales showed a less than seasonal increase. Commodity price changes continued to be relatively small. Prices of common stocks and bonds generally advanced.

Activity in durables declined about 12 percent in October due to strikes. Output of furniture, electrical appliances and most building materials continued to advance.

Nondurables output showed a further rise in October, mainly as a result of substantial increases in textile, paper and printing industries where activity was generally at about the high levels of last Fall.

Folding Boxboards Upped

New price rises of $5 a ton on folding boxboards in New York and other eastern areas reflect rising costs of raw materials and the tighter market condition. Single manila lined chip is priced at $95; bleached manila lined chip at $97.50; white patent coated newsback .020, $115. In Chicago and other midwestern markets, prices range from $2.50 to $5 a ton higher on these same grades.

Waste Paper Prices Strong

As high production schedules of waste-paper consuming mills continue, dealers report an increased demand for all grades of waste paper, the ECC bulletin states. With the first hint of winter, mill buyers are looking over inventory situations and placing orders for additional tonnages. As demands increased, the markets in all areas have stiffened. On several grades, dealers report difficulty in finding adequate supplies.

It is expected that the Christmas shopping season will supply a large amount of the additional waste paper needed in bulky grades. The next 30 days is expected to be a test of the ability of present sources of supply to meet mill requirements without outside aid.

Production Indexes

Ratio of production of unbleached kraft paper to potential mill capacity for that product was 91.4 percent for the week ended November 19, compared with 88.6 percent for the preceding week, and with 103.1 for the corresponding week of last year.

Comparative ratios of U. S. paper and paperboard production to mill capacity, as reported by AP&PA, are:

	Nov. 19 1949	Nov. 12 1949	Nov. 20 1948	Nov. 22 1947	Nov. 23 1946
Paper	100.6	‡99.9	100.8	111.9	106.6
Paperboard	94.0	94.0	97.0	102.0	100.0

‡ Revised.

Paperboard Production (Tons)*

	Nov. 19 1949	Nov. 12 1949	Nov. 20 1948
Production	205,526	207,837	195,552
New Orders	179,741	182,831	174,440
Unfilled Orders	416,000	444,302	373,804

* Source: NPA.

General Business Indexes

Index of general business activity for the week ended November 19 climbed to 142.7 from 129.0 in the preceding week, compared with 156.8 in the corresponding week of 1948.

PAPER AND PAPERBOARD TONNAGES—SEPTEMBER STATISTICS

	Production Aug.	Production Sept.	Production Oct.	Orders Unshipped or Unmade	Stock on Hand
Printing & Similar	248,153*	251,942*	268,000	223,000	105,000
Fine Papers	87,847*	87,104*	93,000	50,000	86,000
Coarse Papers	225,676*	237,612*	265,000	160,000	85,000
Tissue Papers	94,179*	96,154*	104,000	n.a.	n.a.
Miscell. Papers	28,388*	28,172*	31,000	19,500	38,300
Paperboard	823,054*	825,702*	881,000	410,000	n.a.
Building Board	63,841*	84,996*	90,000	n.a.	n.a.
Building Paper	101,125*	106,148*	114,000	n.a.	n.a.
Newsprint, U. S.	77,006*	69,944*	74,000	n.a.	13,502

N.B. . . . n.a.: not available. Source: APPA, NSB.
* Revised to conform to Census Figures. October figures preliminary.

MARKET WOOD PULP PURCHASES, SEPTEMBER, 1949

(Tons of 2,000 pounds)

	Domestic Purchases	Imported: North America	Imported: Other Countries
All grades	87,500	61,914	36,416
Sulfite, blchd.	39,609	13,577	19,474
" unblchd.	12,334	14,311	
Sulfate, blchd.	9,635	12,118	5,302
" semi-blchd.	1,027	350	9,409
" unblchd.	7,472	5,901	
Soda	8,114	....	....
Groundwood	5,399	15,657	2,231
All other	3,910		

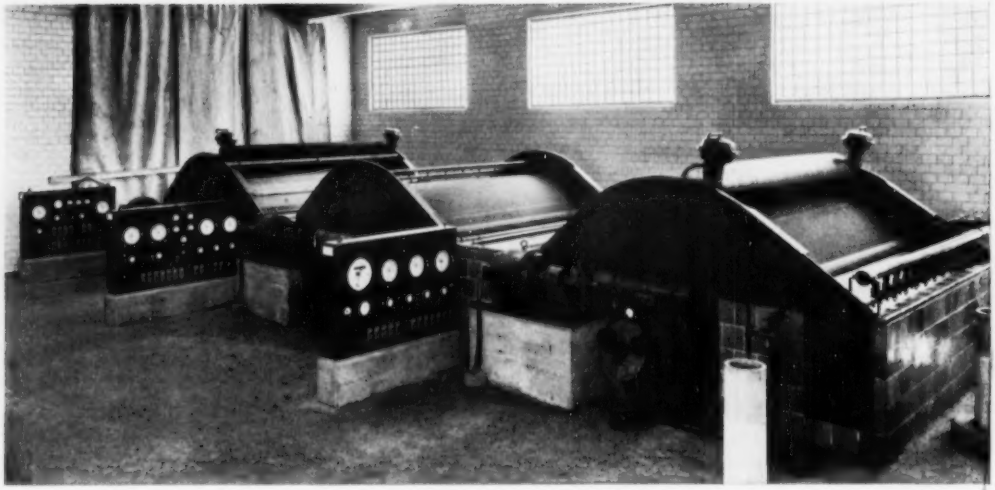
Based on Bureau of Census figures.

WOOD PULP: U.S. PRODUCTION, CONSUMPTION, INVENTORIES, SEPTEMBER, 1949

(Tons of 2,000 pounds)

Grade	U. S. Production: Tons	U. S. Production: % of Base	Consumption in paper & board manuf.	End of Month Inventories: At pulp mills, for later sale	End of Month Inventories: At paper & bd. mills: Sept.	End of Month Inventories: At paper & bd. mills: Aug.
Sulfite, Total	205,899	72.0	256,695		195,697	210,229
Blchd., Total	149,082		159,546	22,844	85,468	95,703
Dissolving & sp. chem.						
Softwood paper grds.	140,617		150,142		82,584	91,961
Hardwood paper grds.	8,465		9,404		2,884	3,742
Unblchd.	56,817		97,149	8,770	110,229	114,526
Sulfate, Total	512,319	82.8	581,060		142,565	161,500
Blchd.	91,016		128,717	....	63,499	67,851
Semi-blchd.	21,697		22,833	....	3,783	3,575
Unblchd.	399,606		429,510	2,888	75,283	90,074
Soda	39,536	78.7	44,409	904	13,644	16,334
Groundwood	154,707	66.0	181,205	61	28,859	29,785
All other	118,669	79.5	117,748	5,064	6,373	5,255
Totals	1,031,130		1,181,117	40,531	388,138	423,103

Based on Bureau of Census figures.



You can save money by spending it

ON TAYLOR AUTOMATIC BLEACHING CONTROL

"UNIFORM BLEACHING at lowest cost per ton." That's what the Mead Corporation of Chillicothe, Ohio, says about the complete Taylor Instrumentation on their new continuous pulp bleaching process. They handle 150 tons of air dry stock daily for production of various grades of fine white paper. This instrumentation on the part of the Mead Corporation is in keeping with the trend of increased pulp bleaching capacity and the expanded use of bleached pulp in the production of a wide variety of specialty papers. The Taylor Control System includes:

1. **Bubble Type Level Instruments** which control operating levels in high density bleaching towers.
2. **Temperature and Pressure Controllers and Valves** for chlorine vaporizers.
3. **A Push-Button and Manual Control Station** for operation of pump motors and control valves in liquor and stock lines remotely located from point of operation.
4. **Level Recorders** for brown stock chests and high density tower.
5. **Temperature Recorder-Controllers and Valves** for high and low density mixers.
6. **Flow Recorders and Controllers** and valves for dilution of stock and fresh water supply to stock washers and showers.

Because bleaching systems are so different in capacity and type, Taylor engineers lay out the instrument specifications with the customer to suit the operating conditions and capacity of each plant. This *Taylor Engineered Instrumentation* is backed up by long experience solving processing and production problems.

MORAL: Whatever paper processing problems face you, Taylor Control can solve them completely and economically. They'll put every function of your most complicated process right at your fingertips. Result—you'll know it's operating at full efficiency and *you'll save money.* Ask your Taylor Field Engineer! Or write Taylor Instrument Companies, Rochester, New York, or Toronto, Canada.

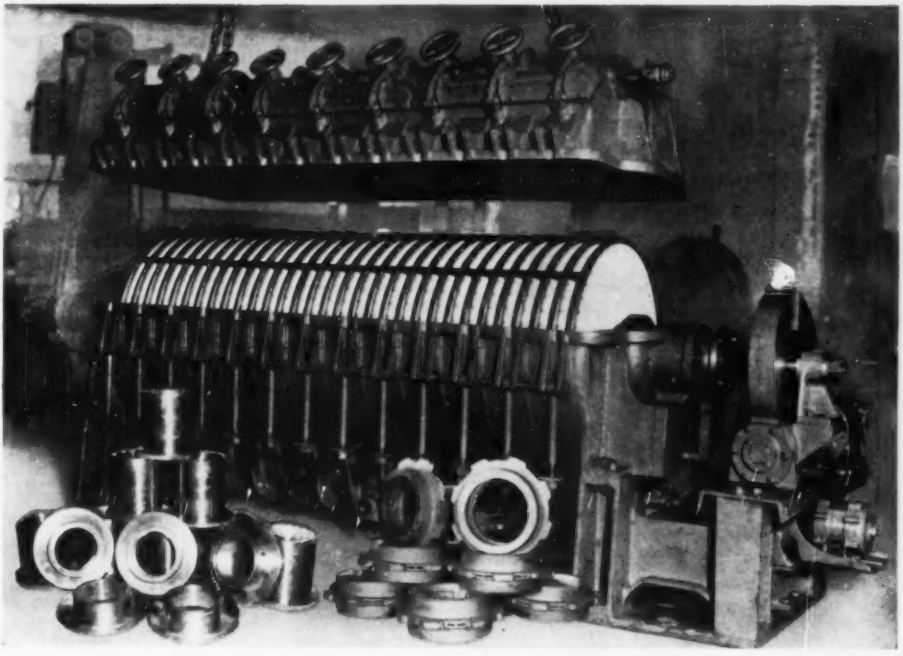
Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.

Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

Centrifugally Cast

ACIPCO STAINLESS STEEL

TUBES AND PARTS



Vallez Rotary Filter designed and manufactured by Goslin-Birmingham Manufacturing Company. Top of filter is raised to show filtering screens. Grouped about filter are some of the Type 316 Stainless Steel Filter castings furnished by ACIPCO.

To protect their enviable reputation in the manufacture of rotary filters this company uses ACIPCO Stainless Steel castings. For the filter shown, ACIPCO furnished 18% Chrome—12% Nickel—2% Molybdenum stainless steel filter hubs, bushings, glands, stuffing boxes, inspection bosses, discharge spindles and centrifugally cast stainless steel shaft 11.25" ODx9" IDx16'-0" long.

ACIPCO can furnish both stainless and carbon steel castings produced in stationary molds, as well as stainless and carbon steel and alloy iron centrifugally cast tubes with outside diameters from 3½" to 50" and varying wall thicknesses from ⅜" to 4". All tubes are cast in standard 16' lengths. ACIPCO is fully equipped with modern electric furnaces, complete laboratory and testing facilities, pattern and machine shops to produce and fabricate your casting requirements.

Inquiries are invited.

AMERICAN CAST IRON PIPE COMPANY

BIRMINGHAM 2, ALABAMA

Paper TRADE JOURNAL

News of the Week

MILLS

Ecusta Sold to Olin Industries

NEW YORK—John M. Olin, president of Olin Industries, Inc., East Alton, Ill., which has been licensed by Du Pont to make cellophane, told *Paper Trade Journal* on November 25 that his company has purchased the Ecusta Paper Corp., Pisgah Forest, N. C., and will launch its entrance into the cellophane industry through location of its initial facilities at that point.

In announcing the purchase of the Ecusta company, Mr. Olin said the facilities acquired in the transaction would shorten by at least four to six months the time required for Olin Industries to begin manufacture of cellophane.

Ecusta manufactures cigarette paper and other grades of fine paper, and the manufacturing processes of these products are fundamentally very similar to those used in making cellophane, Mr. Olin said.

"The Ecusta Paper Corp., already has sufficient capacity for supplying treated water, steam and most of the power to the eight-machine cellophane installation which we propose to make at the outset," Mr. Olin said. "Availability of these facilities not only will expedite our first production of cellophane, but the present Ecusta organization provides a nucleus of trained personnel which can be expanded to provide the necessary supervisory and working force for the cellophane project.

"Our decision to install our initial cellophane manufacturing facilities at the location of the Ecusta plant does not rule out consideration of other plant sites if we decide to expand further within the cellophane industry."

The Ecusta plant will continue to produce its present line of paper, since existing facilities will not be disturbed by the cellophane manufacturing installation. Purchase price involved in the transaction was not disclosed.

At Pisgah Forest it was reported by Harry H. Straus, board chairman of the Ecusta Paper Corp., that General Lucius D. Clay, U.S.A. (retired), who was elected president of that firm recently, had resigned "effective as soon as a successor can be named."

While General Clay declined to give the reason for his resignation, it is assumed that he wished to avoid possible embarrassment from linking his name with that of Olin Industries, Inc., a munitions-making concern. He did not deny that ethics was a factor in his resignation, since he had executed contracts during the war with the Olin organization.

Mr. Straus, who it is reported, will continue as chairman of the board of Ecusta, said that T. N. Word will continue as vice-president of the corporation.

Olle Haeger Forestry College Visitor

SYRACUSE, N. Y. — Olle Haeger, international industrialist, manufacturing pulp and paper products, stopped off here during the week of November 20 to check on research by the New York State College of Forestry to discover commercially-practical methods of getting paper pulp from broad-leaf trees.

Mr. Haeger, who maintains offices in several countries of Europe, has a factory in Buenos Aires making bags from materials sent from Sweden, and other interests in the Mid-West. His headquarters are at Lila Edet, near Stockholm. Mr. Haeger's nephew, Emel Haeger, completed work for M.S., degrees in pulp and paper manufacture at New York State College of Forestry last spring and is now chief engineer of the Inland Board Mill, Lila Edet.

HENRY J. PERRY

—well-known consultant, lecturer and author, assumes the editorship of "Paper Trade Journal" on December 1 . . .Mr. Perry has been active in TAPPI official circles for many years, lectures at the University of Maine, is an officer of several Forestry Associations and brings to The Journal a comprehensive knowledge of the problems met in the manufacture of pulp and paper . . . His international work as a consultant has acquainted him with the economic and financial developments in the industry as well . . . He succeeds H. G. (George) Heitzeberg, who hereafter will devote his time to advertising sales activities in the Mid-West for "Paper Trade Journal" and "Lockwood's Directory."

Crawford Speaks on Duty of Employe

CLIFFSIDE PARK, N. J.—E. A. Crawford, an engineer employed by the strike-bound Continental Paper Co., of Ridgefield Park—who, although more on the management side than that of the employe, found himself leading the final forum discussion of "The Christian Employes' Duty towards his Employer," at Grantwood Congregational Church here on November 15.

No reference was made to the three-month-old strike of his plant by Mr. Crawford, who based his talk on a paper written by James Meyers and issued by the Federal Council of Churches.

According to the paper, it is the duty of the Christian employe to take an active part in his union and to work in the best interests of his fellow workers and his employer. If the union is to function in a democratic manner, Mr. Crawford stated, it is necessary for all of the employes to participate in the union.

Preceding forums have dealt with education, the Christian in politics, the responsibility of the Christian employer toward his employes, and society's responsibilities toward its less fortunate members.

Five Westvaco Safety Dinners

TYRONE, Pa.—The first of a series of five dinners for the 820 employes of the Tyrone Mill of the West Virginia Pulp & Paper Co. for their part in the attainment of a new top safety record was held on November 9. The mill won two national awards, the National Safety Council award and the Edwin Burton Fritz Memorial Plaque. It also won the Westvaco President's Award.

The banquet was prepared and served by the Tyrone Chapter of the American War Mothers.

Chalmers E. Barr, personnel manager of the Tyrone mill and chairman of the safety awards committee, acting as master of ceremonies, opened the program by introducing the guests, Dr John B. Nason, Earl D. Buck, E. S Hooker, J. Lynne Ferner, Walter D. Bauer, General Benjamin C. Jones, the retired employees of the mill and mem-

bers of the safety committee of the Williamsburg mill.

Mr. Barr gave a brief resume of the safety program and called upon Robert K. Meredith, safety director, to present the safety awards to James R. Shea, manager of the Tyrone mill.

There will be four more banquets to celebrate the mill's safety record resulting from the fact that the 820 employes worked a total of 1,694,184 man-hours with but a single disabling injury.

The Tyrone mill safety committee is: Robert K. Meredith, director; James R. Shea, Sr., manager; Chalmers E. Barr, secretary; Dr. David J. Kirk, mill medical examiner; Mrs. Agnes Meyer, mill nurse; Harold Baker, Charles Friday, Stewart Shea, John Beam, Ralph Gill, Leroy Shildt, William Beam, Lester Hearn, Earl Stanley, Paul Caldwell, John Hull, Charles Smith, Christopher Carson, John Harpster, Ralph Thomas, Kenneth Cupp, John Keefer, Harry Thompson, John Dworsak, Henry Mooseker, Harvey Yarnell, David Fink, Joseph Patterson, Richard Wingate. The honorary members are: Walter D. Bauer, J. J. C. Fernau, Dr. John B. Nason, J. Lynne Ferner, Andrew Palmer.

Employes at the first banquet included:

Curtis Wilson, Charles Davidson, Chester Michaels, Eugene Miller, Robert Miller, L. F. Shildt, Sr., Alvin Patton, Joseph Hewel, Robert H. Morgan, Victor Getz, Simon Harpster, Forrest Hazzard, Thomas Miles, Daniel Frye, F. P. Grimm, Jack Miller, Mary Ellen Fowler, David Colebaugh, Jr., Boyd Jensen.

Thomas Oeffner, William A. Kennedy, Joseph Graves, Walter Snyder, Carl Burwell, Frank Fleck, Helen Brisbin, Mary Nearhoof, Mary Celmo, Carollyn Hagg, Esther Webb, Kathryn Bressler, Betty Shaffer, H. W. Mooseker, Edgar Teeples, Sherwood Ziegler, Clair Merryman, Kenneth Heaton, Alfred K. Smith.

William Miller, Karl Getz, Howard Decker, Chillis Laird, John Zimmers, James R. Shea, Jr., Dudley Pearce, Bert Ellenberger, Charles C. Cassady, Francis O'Rourke, Clark Fink, Wilbur Getz, Charles Grimm, Joseph Biddle, Meryl Noel, Lois Beam, Miriam Mogle, Albert Hyndshaw, Jack Westley, Henry Laughlin.

Joseph F. Smith, Albert Slaughters, Gerald Burwell, George O. Calbert, William H. Lynn, Robert Hunter, Sue Barr, Audrey Miller, Lillian Condol, Marie Noel, Jane Dickson, Eleanor Snyder, Carrie Haupt, John Shildt, H. W. Rowan, Lester Wolf, Roy Beckwith, Paul Phillips, Scott Sesseman, Charles T. Barr.

Charles Smith, Paul Funk, James Bennett, Don McLanahan, Harold Weyer, Don Dry, Richard Wingate, James M. McDonnell, William Beam, E. C. Kustenbauder, Edward T. Long, J. W. Wighaman, Elmer Woomer, Jane Bradin, Richard Shellenberger, Joseph Filicky.

Charles Aman, John Hassler, William F. Gearhart, Albert J. Allison, William R. Jones, Rodman Aults, James Warnock, Glenn H. Abrams, Thomas Stever, Helen Merritt, Jean Lykens, Olivia Condol, Maryann Merryman, Carmen Shollenberger, Janet Marthouse, Mary A. Harpster, Stewart Shea, A. R. Sinclair, John Diehl, Donald Dean, Adam Dillon, James W. Robertson.

Wins $27,000 in Radio Quiz

WEST LYNN, Ore. — Zellerbach Paper Co's., Ray W. Campeau picked up $27,000 in prizes on a radio quiz show on November 20, when he was home during his regular work day, nursing a shoulder injury. His wife, Janice, answered the call from Los Angeles from the "Hollywood Calling" Film of Fortune program.

Mrs. Campeau said she'd rather have her husband answer the questions, so he took over the phone, answered two questions correctly and won the prizes. "It was just luck that I was home at all," Mr. Campeau said.

His winnings include an all-expense-paid trip to Italy and a trip to Hollywood for Mr. Campeau, his wife and daughters, Diane, 9, and Beatrice, 7; a 1949 four-door sedan, a $500 U.S. savings bond, a complete wardrobe and other articles.

Mr. Campeau first identified the Ritz brothers from clues, then tried for the pay-off question, identifying the movie titled "Dead-End."

Stockholders Approve Sutherland Issue

KALAMAZOO — Stockholders of the Sutherland Paper Co. have approved a management proposal authorizing issue of a new 4¼ percent $100 par preferred stock, cumulative and convertible into common at any time before January 1, 1960. Conversion will be at the rate of one share of preferred for each 2½ shares of common. Common shareholders as of November 21 or a date to be determined later will be offered the right to subscribe at the rate of one preferred share for each ten common shares held. There are 344,000 common shares outstanding. The subscription period will run for 16 days with price and other terms of preferred to be determined shortly before the offering. The stock will be offered through Lee-Higginson Corp.

Armstrong Christmas Bonus

ARROWHEAD, N. Y.—Nearly $32,000 will be distributed to local employes of the Armstrong Cork Co. on December 20 as part of a general Christmas distribution of the company.

Company directors have voted that the Christmas distribution of two percent of the year's wage or salary shall be made to all active employes, except directors and vice-presidents, who were on the job during a pay period which included November 1, 1949. Total distribution to Armstrong employes in the United States will exceed $800,000.

HOME FROM ITALY

J. C. Zellerbach of the Crown Zellerbach Corp., San Francisco, and Mrs. Zellerbach, are greeted by Baron Filippo Muzi Falconi, Italian consul-general in that city, upon their return from Italy on November 19 for the holidays . . . Communism has been put on the run in Italy, Mr. Zellerbach says . . . For 16 months he has been in a better position than any other American to judge the political temper of the Italians . . . Mr. Zellerbach, chief of the Marshall Plan mission to Italy, spoke from an intimate knowledge gained on many trips into the deepest of the provinces, where he has become so well known that signs "Viva Zellerbach," pop up, and crowds surge around his car, wherever he goes . . . The official said modestly that it was not he whom they were saluting, "but what I represent—America."

Spaulding Goal 66 Percent Won

NEWBERG, Ore.—The Spaulding Pulp & Paper Co's. ultimate objective to attain 200 million board feet of standing timber resources which it will use in the operation of the plant, is 66 percent realized, O. M. Allison, member of the firm's advisory board, told the Chamber of Comerce at a recent meeting.

This objective involves a 60-year cycle in which company-owned acreage sectioned off from zero to ten-year growths of timber would provide the timber needed for operation of the plant.

Asked whether the plant would be moved nearer to its timber areas, Mr. Allison replied that since the company has spent over $800,000 on its present location, such a move is not likely.

Gair Ups Greenwood, White

NEW YORK — Robert Gair Co., has named George B. Greenwood manager of the industrial relations department, and Irving S. White manager of the industrial engineering department. Both men have been in the industrial engineering department, as manager and senior engineer respectively, and with the Gair company for over 15 years.

Developing Safety Attitude

By G. SCHREIBER
Personnel Director
Wausau Paper Mills Co.
Brokaw, Wis.

Trying to develop safe attitudes among workers is a highly involved subject. People who engineer programs and those who are a part of them are continually exchanging ideas. This, essentially, constitutes the basis of a healthy situation—one that stands a fair chance of showing progress. However, the very nature, even the sound of this tired old word "Safety," suggests a seriousness that deserves special treatment. This does not mean to imply that statistics, rule books, regulations, safety committees, bulletins, etc., don't have appeal. As standard approaches, they deserve consideration, but they do have their limits. The real promotional ammunition lies in related ideas removed from the mysteries of basic accident prevention as given in a textbook. People who are alive can appreciate down-to-earth application of the old law of self preservation. This has been a guiding thought throughout our safety activities.

We have earned a substantial savings toward our liability costs. The effort is honest and sincere, with a very high regard toward the fundamentals of accident prevention. When I say honest, I mean that *lost* time because of injury is not "shaded." We have no wheel chairs, crutches, or special "light jobs" to spare points on accident frequency to the National Safety Council. One or 40 days lost through accidents, it all figures in the record.

While recent or new developments in our program are interesting, I believe a review of the record over the past ten years should share some attention.

Portion of Wausau Paper Mills Co. safety deputy group at a regular monthly meeting . . . Safety Director Robert Halder at desk . . . In attendance are: Back row, left to right; Stanley Blarek, Orville Boogie, Ed Younker (maintenance safety inspector Art Larson), and Fred Radtke . . . Front row, same order: Ed Rahn, Ray Opper, A. Jirovec, Wilbur Dehnel and August Halkoski.

First of all, suppose we define several terms:

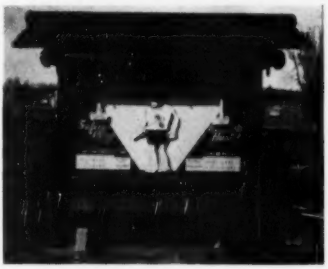
Lost Time Accidents include only disabling injuries. In almost every case, the injured employe is under doctor's care.

Days Lost means any day in which an injured employe is unable to report for work at the start of his regular shift.

Accident Frequency is a figure developed by a standard formula in safety work.

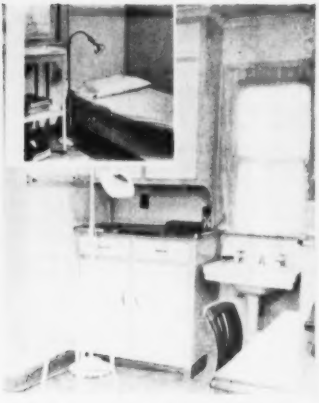
Number of Lost-Time Accidents X 1,000,000
Number of Man-hours Worked

(This formula sets up disabling injuries in figures based on man-hours of exposure, and permits comparison with the efforts of other mills in the same classification.)

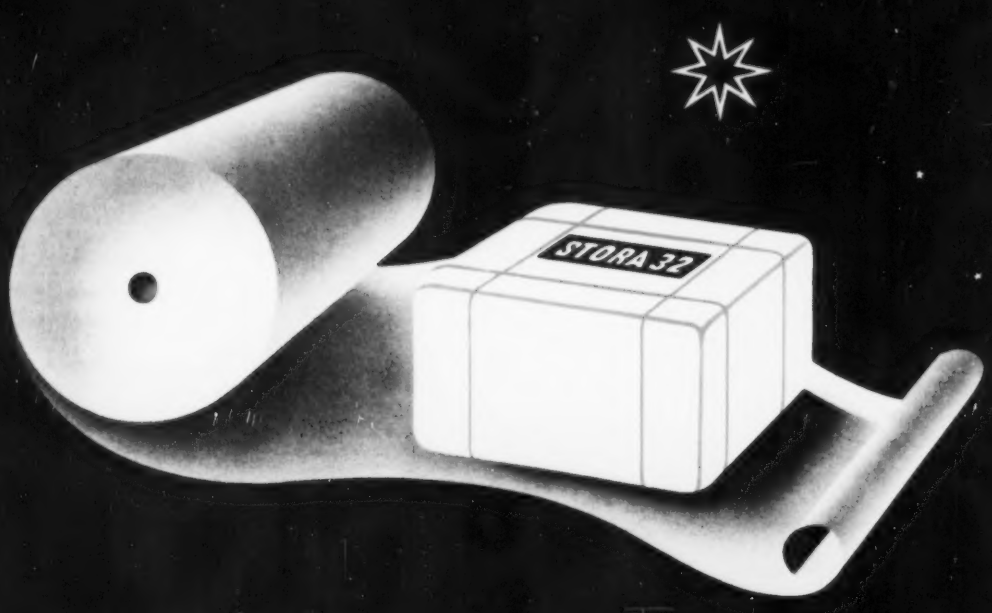


Bulletin Board "Out Front". One side is used for safety posters and displays. Side appearing in photograph shows an up-to-date record of safety figures according to "Accidentee" days lost, and running account by the month for 1948-1949 . . . Alley Oop, or "Accident Alley", lights up his exe, set up with flasher buttons, every time a lost-time accident is registered.

Electrical department crew . . . Record of 2,861 accident-free days . . . Back row, left to right: Herb Laatsch, Barney Brockhyser, Don Hammond and Foreman of Chief Electrician Leslie Hammond . . . Front row, same order: Ed Rahn, Adolph Natal, Glenn Hammond and Wallace Rousseau.



The First Aid quarters are well equipped for virtually any emergency.



WHITE MAGIC

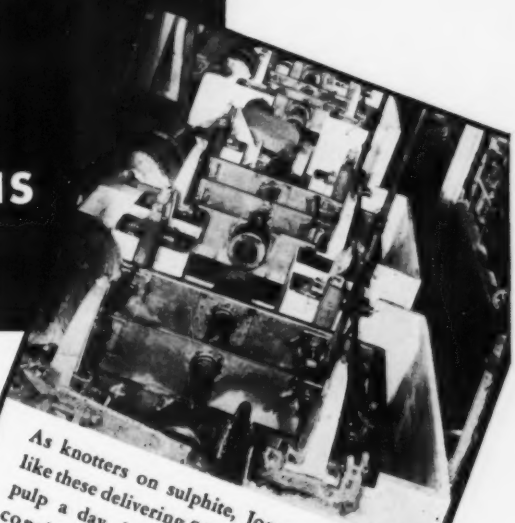
NOW G.E. 90

Here's What

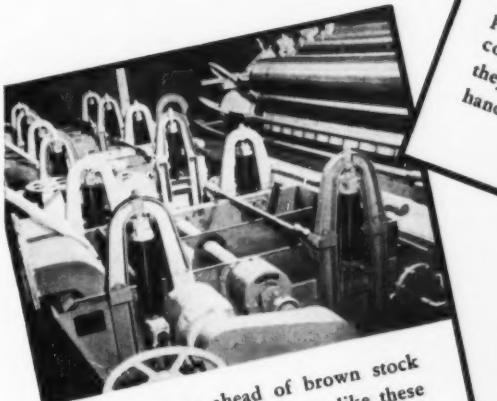
BIRD

JONSSON SCREENS

Can Do For You



As knotters on sulphite, Jonsson Screens like these delivering 80 to 100 tons of clean pulp a day, handling stock up to 1½% consistency; on groundwood and kraft they're delivering 150 tons or more and handling stock up to 2½%.



As knotters ahead of brown stock washers, Jonsson Screens like these are increasing washing efficiency and economy and assuring vacuum maintenance and maximum recovery of black liquor. Foaming is no longer a problem.

On waste paper stocks, Jonsson Screens like these are just the ticket for removing wet strength paper, cellophane, string, paper clips, rubber bands or what have you. Tailings loss is negligible. Capacity is great.

Full information on any or all Jonsson Screen applications may be quickly obtained from

BIRD MACHINE COMPANY

South Walpole, Massachusetts

Background Lost-Time Accidents, Days Lost, and Frequencies (Period 1939-1949 to date)

Year	Lost-Time Accidents	Days Lost	Frequency
1939	25	242	49.2
1940	21	460	41.4
1941	45	679	62.7
1942	43	597	50.4
1943	19	330	24.0
1944	33	335	32.3
1945	19	303	20.08
1946	20	404	20.05
1947	25	461	22.05
1948	24	374	18.5
1949	17 (To date)	199	20.3

Additional considerations to the above figures amount to this. During 1939 and 1940 the average number of people on the payroll (not including clerical workers or supervisors) was 284. The war years hiked this figure to around 470, and the most recent 1949 total indicates a cut back to 380.

One might conclude from this that there has been progress over the years, especially with the emphasis set on safety during 1945. The present program with a full-time safety director was inaugurated at that time. Accident frequency has held its own since then. A few rather serious disabling injuries have added days lost to the record, but the frequency has gone down while the number exposed to injury has increased. Quite a number of accidents on record are one- and two-day affairs. There have been no fatalities charged to the program so far. We'd like to feel this may continue. So much for the record.

One of the first steps in setting up the present program was to develop and encourage the activity of a safety deputy organization throughout our plant, with one representative from each department. Deputies are contact men on the job with instructions to report unsafe practices or conditions to the supervisors and safety director. They are regular members of the safety committee which meets once a month to discuss problems, accidents, and improve their position on safety subjects. Slides, films, 16 mm movies, demonstrations, outside speakers, etc., are used to good advantage. Each department displays a large safety board which shows the number of accident-free days and the name of the person charged with the last disabling injury.

At the gate, adjoining our parking area and main approach to the time clock office is a large outside Safety Bulletin board emphasizing the mill's up-to-date safety record. The design and approach used varies from year to year. This year the selection was a popular comic-strip character from the local daily newspaper called "Alley Oop." Mr. Oop is a prehistoric adventuresome gent who totes an axe and gets into more wild, impossible situations than are allowed ordinary people. By shifting the implication of "Axe" and "Alley," we've come up with *Axe-i-dent* Alley as our '49 attention arrestor. The axe in Alley's hand has two light bulbs with flash buttons at the head of the weapon. Whenever there is a lost-time injury, a flick of the switch sets the lights into action for twenty-four hours. The white axes at each side of the display are painted discards from our wood room tool box. The one at the left gives the name of the last man injured and the date. At the right is the running total of work days lost in the mill during the current year. The '48 and '49 monthly records for each of our two Union Locals are shown in the lower corner positions. This is a green and white display with black outline lettering. The ceremony of relettering the axe and switching on the lights around accident time carries interest with workers on all shifts.

The mill has a full-time registered nurse on duty from 7:30 a.m. to 4:00 p.m. each day. Marion Radtke is considered one of the best industrial nurses in this locality. She handles the company accident and health insurance, distributes benefit checks in connection with our all-mill insurance. Marion advises our men with aches and pains. She takes care of a dozen or more safety lockers or first aid stations around the mill, and attends to minor injuries.

Pictured herewith are members of our electrical department. As one might suspect, this crew just can't afford mistakes. The result is that they are leading our 12 departments in accident-free days. To date they've accumulated 2,861. Others with fine records include the bleach plant with 2,472 days, wet machines 772, and digesters are proud of the 770 figure at their board. Several have records of a year or more. The actual figures at department safety boards are marked in with chalk and changed frequently.

We use a variety of stunts to create safety interest. Everyone is constantly on the lookout for new angles and ways to feature safety subjects. For example, one program directed at the importance of eye protection was featured with a take-off of an idea explained in *Life* magazine several years ago. Again, a little shuffling of the original to suit our purpose, but it brought out the point. As an experiment, we divided one of the meeting groups in across-the-table fashion. The members at one side were securely blindfolded, while others across the table helped with the experiment. Our blindfolded people were asked to light and smoke cigarettes, identify otherwise familiar objects, write their names, and do a number of other simple everyday actions. At a halfway point, the blindfolds were exchanged, and partners across the table took a turn at the confusion. This brought home very forcibly the helplessness accompanying a sudden loss of eyesight.

Of the many safety features employed, one in particular seems to have carried over a number of years. It's our internal publication called *Safety Sidelites*. The original purpose, when it started in '45, was to create a proper mixture of safety and news, and at the same time keep people advised of new developments in the program. It started as a one-page affair, and, after four years, has grown to from eight to ten pages. *Sidelites* is a monthly publication edited by the personnel department. It includes first-aid articles by the nurse, safety news features by the safety director, and the efforts of at least several dozen persons in many ways. Our printing department has a vari-type machine which allows a fairly nice print job on the multigraph. Printed on our own paper in various colors, the whole job, from end to end, is strictly local, except portions of the copy.

V. C. DOUGLAS

—was recently elected a vice-president of the St. Regis Paper Co., New York . . . Mr. Douglas joined St. Regis in 1926 and prior to his election served for some 20 years as manager of the Central District of the company's Multiwall Bag Sales Division.

Hudson Files with SEC

NEW YORK—The Hudson Pulp & Paper Corp. on November 21 filed with the SEC a registration statement covering 120,000 shares of $25 par value cumulative preferred stock, Series B, to be offered at a price to be filed by amendment.

The Lee, Higginson Corp. has been named principal underwriter of the offering. The dividend rate and the underwriting terms also are to be filed by amendment.

Chillicothe Personnel Changes

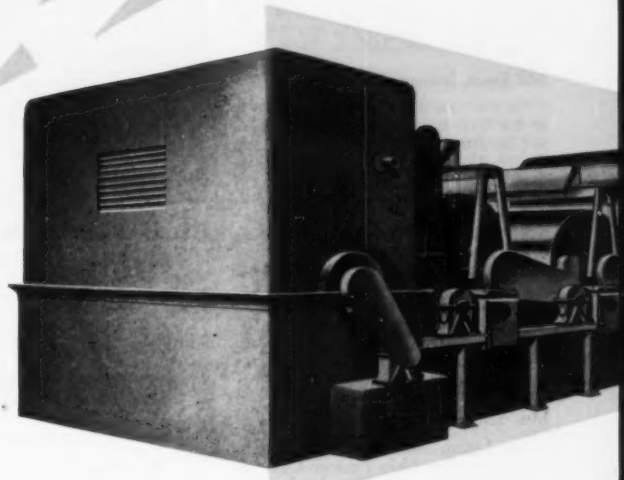
CHILLICOTHE, Ohio—Chillicothe Paper Co., has elected N. A. Seidensticker, treasurer, to the board of directors, to take the place of E. F. Bearce, deceased. At the same time it named A. I. Cahill vice-president in charge of sales; Russell McVicker, vice-president in charge of purchasing; F. L. Zellers, mill manager; and E. A. Hoey, sales manager.

as you were in 1900

Individual skill and rule-of-thumb methods were the dominant factors in textile processing as in many other fields such as paper, glass and soap-making, and sewage disposal

as you are today

Speed, accuracy and scientific control are the keynotes in modern textile production



. . . with a helping hand from Niagara Alkali

Huge, complex and increasingly progressive, the textile industry has made truly remarkable progress since the turn of the century. New methods, new finishes, new fibres have added vastly to the beauty, durability and variety of its range of fabrics.

By pioneering the domestic production of liquid chlorine, caustic soda and other electro-chemicals, Niagara Alkali has helped to make such improvements possible. Niagara's pioneering has also greatly benefited the paper, glass, soap and other industries. Look to Niagara for pioneer quality and service in electro-chemical products.

NIAGARA ALKALI COMPANY

60 East 42nd Street, New York 17, N. Y.

Liquid Chlorine · Caustic Potash · Carbonate of Potash · Paradichlorobenzene · Caustic Soda · NIALK TRICHLORethylene

Westvaco Recreation Building Opens

CHARLESTON, S. C.—The newly-completed $60,000 recreation building of the Westvaco Paper Mill Athletic Ass'n. was formally opened November 25. Henry J. Lee, past president of the association, under whose leadership the project was planned and financed, presided during a dedication program. Among the speakers were Theodore A. Cook, manager of the North Charleston plant of West Virginia Pulp & Paper Co.; John D. Cowan, of New York, representing top officials of the company. Main section of the clubhouse contains an auditorium seating 700 persons. A. P. Bauer, Jr., is president of the Paper Mill Athletic Ass'n.

Mill Execs. Instruct B. C., Students

VANCOUVER, B.C.—Forestry students at the University of British Columbia are getting "inside information" on British Columbia's pulp and paper industry this year with executives of several B. C., companies giving lectures to fourth-year students on the work and research being done by their organizations.

Speakers include: J. A. Young, Pacific Mills, Ltd.; J. E. Liersch and I. H. Andrews, Powell River Co.; R. H. R. Young, Pacific Mills; D. J. Maclaurin, Powell River Co.; and L. K. Bickell and R. J. Killam, B. C. Pulp & Paper Co.

Mrs. Scholz' Estate, $291,018

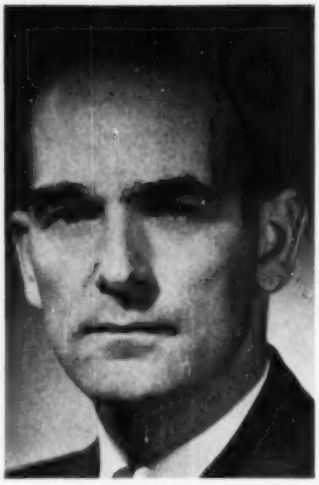
ST. LOUIS, Mo.—In an inventory filed November 23 in Probate Court at Clayton, the estate of Mrs. Annie C. P. Scholz, wife of Walter V. Scholz, retired president of the Graham Paper Co., was valued at $291,018. Bonds valued at $185,000 represented the chief holding in the estate. Cash was listed at $87,678 and real estate at $12,220. Twenty-seven and one-half shares of Graham Paper Co. stock were carried at $100 par value. Mrs. Scholz, who died October 18, left the bulk of her estate in trust.

Hilfert New Riverside President

APPLETON, Wis.—Riverside Paper Corp. has elected E. C. Hilfert, president, succeeding the late C. B. Clark; E. F. Davis, vice-president-treasurer; L. B. Catlin, vice-president; E. J. Dempsey, secretary and chairman of the board; and F. R. Watson, assistant secretary and treasurer. These officers also comprise the board of directors of the corporation.

Truesdale to Nekoosa-Edwards

PORT EDWARDS, Wis.—Freeling M. Truesdale has joined the Nekoosa-Edwards Paper Co., to engage in technical service on Nekoosa and Nepco papers for determination of their performance in the various operations or processes in which they are used. Previously he was with the Hammermill Paper Co., and the Marathon Corp., successively.



DR. H. BORDEN MARSHALL

—assistant director of chemistry, Ontario Research Foundation, and in charge of research on wood chemistry, is also secretary of the Advisory Committee on Forestry Research Council of Ontario.

ASSOCIATIONS . . .

TAPPI Agricultural Residues Meeting, Terre Haute, Ind.

TERRE HAUTE, Ind.—A two-day conference on straw pulping sponsored by the TAPPI Fibrous Agricultural Residues Committee under the chairmanship of S. I. Aronovsky, was held here November 7-8. The Terre Haute Paper Co., was host to the 71 persons registered at the conference. In addition to holding open house at its strawboard mill, the company gave a cocktail party and banquet for the guests at the conference.

The technical program was held at the Terre Haute House. On the afternoon of the first day a Hydrapulper demonstration run was made at the Terre Haute Paper Co., plant and on the following afternoon delegates visited the laboratories and penicillin plant of the Commercial Solvents Corp.

After being welcomed by R. F. Burns, vice-president and production manager of the Terre Haute Paper Co., the first technical session was given over to the problems involved in processing and refining straw pulp.

The first paper prepared by C. E. Price and C. G. Krancher of the Ball Brothers Co., Noblesville, Ind., described the application of a Hydrapulper for processing straw. This company installed an 11-foot Hydrapulper and has made a number of experimental runs wherein the Hydrapulper was used to replace rotary digesters. Straw pulp processed in the Hydrapulper was bleached with waste corrugated stock and run on the paper machines. The nine-point corrugating board thus produced tested favorably when compared to strawboard containing pulp made by conventional methods. The authors reported the experiment to be favorable in many respects. Considerable savings appear to be realized in that Hydrapulped straw shows increased yields over conventional methods. Substantial steam savings were apparent but power requirements appeared to be somewhat higher it was stated. Use of the Hydrapulper in this process would permit simplifying and streamlining of the whole straw pulping process, it was explained. A simpler flow system with less mechanical equipment such as conveyors and pressure vessels should provide a savings both in labor for operation as well as maintenance, the speaker added.

The roll-type fiber press for use in straw pulping was described by L. F. Herman of the Fulton Iron Works Co., St. Louis. He outlined the two main types of applications for this equipment. The roll press may be used for cutting raw straw prior to pulping and it may be used for defibering and cutting cooked straw as well as separating cooked pulp from the cooking liquors. Samples of straw and straw pulp processed in the roll-type fiber press were exhibited.

Application of disk refiners in straw pulping processes was outlined in a paper prepared by C. K. Textor and L. E. Eberhardt of the Bauer Brothers Co., Springfield, Ohio. It was pointed out that there is no one reliable method to serve as a basis for choosing between the single disk and double rotating disk units. The only reliable means to determine the best type of mill and the most effective method of application, it was asserted, is to make actual trial runs on a particular raw material. The authors outlined a number of experiments carried out on straw pulping problems that have resulted in a better understanding of straw pulp refining.

J. R. Little of the Hinde & Dauch Paper Co., Sandusky, Ohio, described briefly the use of the Hydrapulper in his company's operations. Cooking experiments in an eight-foot Hydrapulper and refining the pulped straw in a double disk refiner produced results which corroborated, in general, those reported by Messrs. Price and Krancher. One of the experiments involved a 48-hour continuous run.

Final paper of this session, by J. R. Ayers of E. D. Jones & Co., Pittsfield, Mass., discussed the general problems involved in refining straw pulp. An informal report was given on the work and results to date of the Northern Laboratory-strawboard industry collaborative research program for improving the quality of strawboard pulp. This was followed by an informal panel discussion of the papers given.

The second technical session consisted principally of reports on the activities of the Fibrous Agricultural

Residues Committee, including reports of the sub-committees on straw procurement and preservation and on the progress in developing the laboratory corrugator.

Eleven mills have cooperated in experiments in straw preservation. Continuing this work, since the last meeting a year ago, it has been found that crude borax is the cheapest and most effective straw preserving agent yet to be tested on a commercial scale. Slides were shown of uncovered straw ricks, some of which had been treated with borax and others which had received no treatment. Comparison of the two showed that the treated straw gave little evidence of deterioration while the untreated ricks showed the top layer of bales to be badly deteriorated. Ordinarily, five to 15 percent of ricked straw is lost due to spoilage and the application of borax appears to be capable of reducing these losses.

An important point brought out in the discussion was that spoilage is decreased where straw is more densely baled. Seventy-pound bales with galvanized wire ties do not deteriorate as rapidly as the less dense bales, due to the fact that moisture does not penetrate as easily. This, of course, is a problem of procurement which depends on the type of machine used in straw baling.

Certain mills report that they cook the decayed straw separate from the good straw, followed by blending. Separate cooking of the decayed straw permits the use of less chemicals and shorter cooking time. The problem of covering straw ricks with prefabricated aluminum sheeting was also discussed.

One of the most interesting parts of this session was the report on the laboratory corrugator. Norval Wilson of the Alton Boxboard Co., exhibited a model unit, and explained its operation. Further work in this development will be carried out.

Use of straw and other agricultural residues in the European pulp and paper industry were outlined by Dr. Joseph E. Atchison, chief of the pulp and paper section, Forest Products Branch of ECA, at the first day's luncheon. He outlined some of his experiences encountered in a five months trip through Europe, where he made a survey of the paper industry in seven western European countries. Various pulping processes were described and the nature of the European paper industry was outlined.

Ohio Section TAPPI Meeting

DAYTON, Ohio — The Ohio Section, TAPPI, met at the McCall Corp., plant on November 8. After dinner, Messrs. Moore and Levy of McCall's gave brief talks on the development of printing, and the origin and operation at McCall's, after which the 122 members and guests were escorted through the plant.

Boston PTA Fall Meeting

BOSTON—Courses in paper manufacturing to be given at the Lowell Textile Institute, Lowell, Mass., were announced at the Fall Meeting and Dinner of the Boston Paper Trade Ass'n., on November 16 at Hotel Somerset. Two hundred and twenty-five members and their guests in paper manufacturing and distributing attended.

After cigars were lighted, President William N. Stetson called the meeting to order. Taps were sounded for the late Leon H. Young, of the John S. Cheever Co., who was elected June 12, 1918.

The following new members were elected: John G. McNaught, American Writing Paper Corp; Wallace K. Graves, International Paper Co.; Allen I. Hatfield, Hurlbert & Hatfield Co.; Ernest W. Beals, International Paper Co.; Theodore F. Duffy, Union Bag & Paper Corp.; Andrew W. McBurney, Oxford Paper Co., and Allen J. Ginty, The Century Paper Co.

President Stetson appointed the following as members of the nominating committee for 1950: Colonel Charles S. Proctor (chairman), John W. Vivian, Robert M. Stone, John R. Halkyard, and C. Edward Rice.

Richard Proctor made the announcement of the courses in paper manufacturing and usage. A course will be held Tuesday evenings from January 3 to March 7, from 7 to 9 p.m. The course includes problems of the industry, printing, etc. A two-week summer course, day-time, students to be resident at the Institute, will be given later. For the present, further information may be obtained by addressing the Institute.

Walter G. Leathe, of Malden, Mass., the speaker of the evening, gave a dramatic recital of how "I Was Shanghaied into the French Foreign Legion."

APPA Pushing Two Pollution Bills

NEW YORK—Commenting upon two bills introduced into the House of Representatives on the subject of pollution treatment, The American Paper & Pulp Ass'n., on November 17 bulletined its members, in part, as follows:

"On June 9, Reprecentatives Byrnes (R., Wis.) and Chatham (D., N. C.) introduced H. R. 5089 and H. R. 5091 respectively. On October 14, Representative Simpson (R., Pa.) introduced H. R. 6434, which is identical in language with the Byrnes-Chatham bills, except for the preamble.

"These are bipartisan bills which provide that industries installing pollution treatment works which comply with State Pollution laws and which are found by the Surgeon General to be in furtherance of a Federal Pollution Control program, shall be permitted an election for Federal income tax purposes to amortize the cost of such facilities over a period of 60 months.

"This proposed amendment to the Internal Revenue Code would be applicable to facilities constructed, reconstructed, remodeled, installed or acquired after June 30, 1948 and before July 1, 1953.

"Under the present provisions of the Internal Revenue Code, paper mills and other manufacturers who install treatment works are only permitted to take depreciation in accordance with the provision of Section 23 (1) which relates to exhaustion, wear and tear, and obsolescence.

"The proposed bills recognize that the paper and other industries are anxious to abate their own pollution and frequently cannot afford under the present depreciation provision of the Federal Income Tax Law to construct facilities and still maintain their competitive position. The Chairman of the Ways and Means Committee has given assurance that the committee will hold hearings on these bills, and it is important that all contacts be made before the Congress convenes in January, so that we can press for immediate hearings.

"As you know, the Congress recently adjourned until January 3, 1950, and most, if not all, Congressmen will be in their home districts at same time during the next two months. Many of the members of the paper industry have stated their desire for the correction of the injustice that now exists under the Federal Tax law with respect to the cost of water pollution abatement facilities. Mills which are interested in this problem should communicate with their Congressmen during the recess and explain the need for the enactment of this bipartisan legislation now pending in the House Ways and Means Committee."

NAWMD Meet, March 13-15

NEW YORK—Paul Jos. White, of the Great Eastern Packing & Paper Stock Corp., will be chairman of the National Ass'n. of Waste Material Dealers, Inc., thirty-seventh annual convention March 13-15, at the Waldorf Astoria hotel, James T. Flannary, president of NAWMD states. To assist Mr. White the following two co-chairmen were named: William Abramson of A. Abramson & Sons, Inc., Newark, N. J., and Herman D. Moskowits of the Schiavone-Sonomo Corp., Jersey City. These three men will head up the convention committee and will be in charge of the entertainment committee.

Tinker Addresses SAPIs.

NEW YORK — E. W. Tinker, executive secretary of the American Paper & Pulp Ass'n., addressed the Salesmen's Ass'n., of the Paper Industry at the November 28 meeting of the latter group at Midston House.

Boston SAPIs See "King Spruce"

BOSTON — The local section of the Salesmen's Ass'n., of the Paper Industry held an open meeting at the Parker House on November 28 when the Brown Co's., movie film, "King Spruce" was screened.

Joint Meeting in Niagara Falls

NIAGARA FALLS, N. Y.—The regular monthly meeting of the Western New York Group, Empire State Section of TAPPI, took place November 9 at the Prospect House. This was a joint meeting with the Niagara Branch of the Technical Section of the Canadian Pulp & Paper Ass'n., with some 200 guests of the two groups in attendance.

The address of the evening, delivered by John P. Burke, president-secretary of the International Brotherhood of Pulp, Sulphite, and Paper Mill Workers Union, traced the early growth of the trade union movement in the United States.

The joint meeting was presided over by Dr. Joseph S. Reichert of the DuPont Co. George Rand of the International Paper Co., introduced the speaker.

FORESTRY

Sustained Yield Plan O-K'd

ABERDEEN, Wash.—Lyle F. Watts, chief forester of the U. S., has approved the Grays Harbor community type working circle that will dedicate the sustained yield cut of 60 million feet annually from 116,583 acres of Olympic national forest timber to primary manufacture in this area.

The circle, officially known as the Grays Harbor federal sustained yield unit, was approved at Washington, D. C., on November 2 and was announced on November 4 by H. J. Andrews, Portland, forest service regional forester.

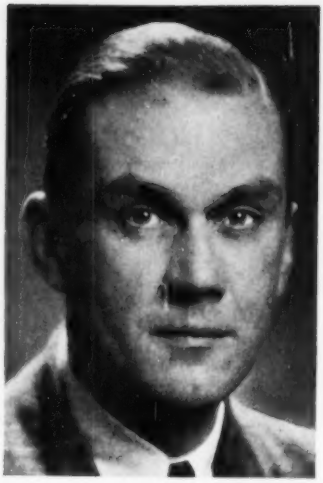
The sustained yield unit consists of two areas in the Humtulips, Matheny Creek and Quinault watersheds of the Olympic national forest. It was a stand of nearly 4½ billion feet of 94 percent virgin timber.

Timber from the unit will be sold at public auction, the present method of selling timber, but successful bidders must agree to primary manufacture in Grays Harbor county west of a line just east of Elma.

The yield from the sustained yield unit is dedicated to the harbor on a perpetual basis on the condition that timber be given primary manufacture here.

The annual cut will remain at 60 million feet a year for at least three years. Every third year, the operation of the unit and the sustained yield potential will be reviewed and if the objectives of the unit are being carried out, it will be continued; if not, the unit can be dissolved by the chief forester.

The unit's objectives are to stabilize communities, forest industries, employment and taxable forest wealth; to assure a continuous and ample supply of forest products, and to secure the benefits of forests in regulation of water supply and stream flow, prevention of soil erosion, amelioration of climate and preservation of wildlife.



DEAN J. W. B. SISAM

—of the Faculty of Forestry, University of Toronto, who presided at a two-day semi-annual meeting of the Forestry Advisory Committee of the Research Commission of Ontario, at "The Grove" Arnprior, Ont., on the estate of D. A. Gillies, where more than 50 college professors, biologists, forestry technicians, pathologists and wood chemists, gathered to discuss forests and forest products.

According to the latest cruise of the timber, the unit contains 276,771,000 feet of Douglas fir; 2,079,912,000 feet of western hemlock; 329,374,000 feet of western red cedar; 1,559,960,000 board feet of Pacific silver fir; 217,599,000 board feet of Sitka spruce, and 16,616,000 board feet of miscellaneous species.

Establishment of the sustained yield unit climaxes a 20-year campaign by harbor business, industrial, governmental and labor leaders.

The Grays Harbor unit is established under the same law as the Shelton co-operative unit, which went into effect a year and one-half ago.

However, the Shelton unit agreement provided that the Simpson Logging Co. would pool private timber with federal timber and then cut on a sustained yield basis. The agreement is for 100 years.

The harbor unit, however, dedicates the timber to the area. There is no pooling of private timber. The forest service will sell timber only to companies that agree to primary manufacture in the harbor area. The new unit is on a "perpetual" basis, subject to operational review every three years.

Hoberg Joins Trees for Tomorrow

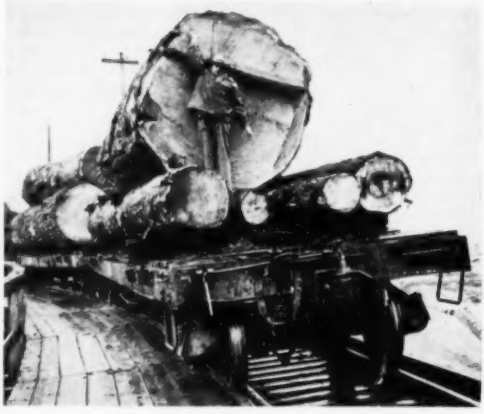
GREEN BAY, Wis. — Hoberg Paper Mills, Inc., has become a member of Trees for Tomorrow. "Our mills are located in a highly developed agricultural and industrial region," J. M. Conway, president of the Hoberg Mills, pointed out. "Trees cannot be planted and managed as extensively on good producing farm lands as they can on natural forest tracts. However, industry and citizens in all sections have a very definite stake in trees as a crop and should contribute in whatever way they can to the full development of our northern forests. Some day, in the not too distant future, these forests will not only produce a greater share of the raw material for the state's wood using industries, but will also help in many ways to stabilize the economy and social well being of Wisconsin."

Hoberg is the first mill on the Fox River to join in the long-range tree planting, forest management, and conservation education program sponsored by Trees for Tomorrow.

Other Wisconsin members of Trees for Tomorrow Inc., are Consolidated

THE BIGGER THEY COME, THE HARDER THEY FALL

Loggers in the hills back of Tacoma whittle down some big trees on occasion, but few surpass the one pictured above on a flat car at the West Fork Timber Co. booming grounds. Larry Aus, the firm's boom manager, can't reach the top of the 9-foot butt. The log, scaling 7,800 board feet, was logged by the St. Regis Paper Co., at Mineral, Wash., and sold as peeler to the Puget Sound Plywood Co.



Water Power & Paper Co., Wisconsin Rapids; Whiting Plover Paper Co., Stevens Point; Mosinee Paper Mills Co.; Marathon Corp., Rothschild; Wausau Paper Mills, Brokaw; Ward Paper Co., Merrill; National Container Corp., of Wisconsin, Tomahawk; Tomahawk Pulp Co.; Rhinelander Paper Co.; and Kansas City Star Co., Flambeau Paper Division, Park Falls; Wisconsin Public Service Corp.

Lodgepole Pine "Cinderella"

BEND, Ore.—Lodgepole pine, the "Cinderella tree" of an era of diminishing virgin forests, has important possibilities in areas faced with curtailment of lumber production, senior and junior chamber of commerce members were told at a luncheon meeting at the Pine tavern recently. The speaker was Robert Cowlin, Pacific northwest forest and range experiment station chief of forest economics. Introduced by James W. Bushong, Mr. Cowlin had as his topic "Developing Our Forest Resources."

Mr. Cowlin mentioned that a large pulp manufacturing concern at St. Helens has already displayed its interest in lodgepole stands of central Oregon, having recently purchased 40,000 acres of lodgepole pine in northern Klamath county, some of which it has shipped out. However, the stand is being kept as a reserve. The lodgepole pine, mixed with other species, is being used in the manufacture of kraft paper.

The forest economist mentioned that one of the problems faced in production of pulp locally would be that of an adequate water supply. He said manufacture of 200 tons of pulp a day would require about 4,000,000 gallons of water.

Maher Sees Timber Vanishing

QUEBEC, Que. — Thomas Maher told the 20th annual convention of Quebec Forestry Engineers' Association on November 22 that Quebec province's annual cut of wood has jumped from 4,000,000 cords in 1937 to 7,000,000 cords. The forestry engineer said forest reserves have disappeared, wood has been exported and the total area of new planting amounts to only 750 acres. The extent of planting, he said, would provide only 6,000 cords of wood in the next 50 years.

Mr. Maher asked if there is enough wood in Quebec to continue supplying 48 pulp and paper mills in the province, four in New Brunswick and others in Ontario and the United States. He wondered whether cutting should not be reduced by 50 to 75 percent.

Wind-Felled Timber Sold

MADISON, Wis. — Sale of three million feet of timber felled by wind in the Flambeau River state forest was reported by the public land commission on November 18.

The virgin timber, in Sawyer county, was on land owned by the commission and the state conservation department. It was damaged by a windstorm on October 10. About 90 percent of the timber was hemlock, the rest, hardwood and pine. The price the state received was not revealed.

The timber was on seven tracts of land. Two million feet were bought by the Phillips Flooring & Lumber Co., and the remainder by the Consolidated Waterpower & Paper Co.

The conservation department will be in charge of cutting and scaling.

BOARD OF TRUSTEES OF AFPI, WASHINGTON

The board of trustees and officers of American Forest Products Industries, Inc., met on November 2 in Washington, D. C., at their annual business meeting . . . Seated, left to right: Stuart B. Copeland, Northwest Paper Co., Cloquet, Minn.; Walter J. Damtoft, Champion Paper & Fibre Co., Canton, N. C.; Leonard G. Carpenter, Shevlin-McCloud Lumber Co., Minneapolis; Col. William B. Greeley, Seattle, chairman of the board; W. J. Bailey, West Virginia Pulp & Paper Co., New York; Sydney Ferguson, Mead Corp., New York; Clyde S. Martin, Weyerhaeuser Timber Co., Tacoma; E. W. Daniels, Harbor Plywood Corp., Hoquiam, Wash.; and J. M. Brown, Northwest Timber Co., Spokane . . . Standing, left to right: William Swindells, Willamette Valley Lumber Co., Portland, Ore.; John B. Veach, Hardwood Corp. of America, Asheville, N. C.; P. H. Glatfelter, P. H. Glatfelter Co., Spring Grove, Pa.; W. G. E. Nicholson, Union Bag & Paper Corp., New York; C. O. Brown, International Paper Co., New York; Karl Swenning, Hollingsworth & Whitney Co., Boston; and Charles A. Gillett, Washington, D. C., secretary and managing director of AFPI . . . Alexander Calder of New York, and James L. Madden of Boston, representing the Union Bag & Paper Corp. and the Hollingsworth & Whitney Co., respectively, although members of the AFPI board of trustees, do not appear in the picture. They were represented in Washington by Mr. Nicholson and Mr. Swenning.

Secretary of State Fred R. Zimmerman, commission chairman, and Chief Clerk T. H. Bakken conducted the sale in the forest November 15.

Cliff Succeeds Spencer, Retiring

WASHINGTON—The Forest Service, U. S. Department of Agriculture, has named Edward P. Cliff of Ogden, Utah, regional forester of the Rocky Mountain Region to succeed John W. Spencer, who will retire from the Denver regional office on December 31

KENTUCKY'S GOVERNOR ENDORSES KEEP GREEN

Pointing out that forest fire prevention is good business for everybody, Governor Earle C. Clements, standing, gave enthusiastic support to the newly organized Keep Kentucky Forests Green program. He was the principal speaker at a state-wide forestry conference luncheon held in Louisville on October 28.

after almost 40 years with the Forest Service. Mr. Cliff, a Forest Service employe since 1931, is at present assistant regional forester in charge of range and wildlife management for the Intermountain Region, with offices in Ogden.

Colorado Pulpwood Source Seen

DENVER—Western financiers and industrialists are watching with increasing interest Colorado's proposed stake in the pulpwood market, and Government officials and civic organizations are preparing plans for development of pulpwood and paper plants along the Colorado river between Rifle and Glenwood Springs.

Preston Walker, president of the Columbine Development Co., has disclosed that his organization has been planning to install a 17 million-dollar pulp and paper plant in the region for more than a year. He said the mill would utilize timber throughout forests of western Colorado killed by beetles. Walker estimated that the mill would operate for more than 30 years on the timber available in the region.

Mr. Walker also said he will confer with U. S. Forest Service officials in Washington, D. C., this fall about buying the dead forest sections. Provided the officials can agree on price, it would probably be the largest sale of timber ever negotiated by the United States.

Sustained Yield Unit Approved

ABERDEEN, Wash. — The first sustained forest yield unit in the Pacific Northwest was formally approved here on November 6 by Chief Forester Lyle F. Watts.

Mr. Watts endorsed the records of the public hearing held here on August 2 to create a sixty million foot sustained yield unit in the Humptulips, Matheny creek and Quinault watershed national forest areas. Approval of the conservation measure became effective on November 2.

Under provisions of the plan, lumber producers in the Grays Harbor area will bid on timber in the designated areas subject to the requisite that primary manufacture of the timber take place in the Grays Harbor area.

Carl Neal, superintendent of the Olympia national forest, said that adoption of the plan means that Puget Sound mills cannot bid on timber for transportation to Puget Sound for manufacture.

Timber Harvest Field Day

MARINETTE, Wis.—One hundred timbermen and farmers inspected the 1949 cut at the forest located near the Menominee river on November 2. The forest is six miles east of Wausaukee. New logging equipment was demonstrated as part of the Fourth Annual Timber Harvest Field Day activities. R. W. Abbott, extension forester of Wisconsin U., said 132 cords of pulp and boxwood and 5,000 board feet of white pine have been cut at the site in the past five years. Don Woulfe of Pound demonstrated new type of skidding logs with an attachment on a common farm tractor. Power chain saws also were demonstrated.

Idaho Pulp Expansion Seen

COUER D'ALENE, Idaho. — Tremendous developments of the pulp industry in north Idaho during the next five years or so are visioned by Rep. Compton I. White (D-Idaho).

Rep. White on October 3 asked the Forest Service to undertake a survey of the estimates of pulp timber tributary to Lake Pend Oreille and Lake Coeur d'Alene. The data gathered would be made available to chambers of commerce and other organizations, Rep. White continued.

Crown Stumpage Fees Lowered

OTTAWA. — Lower stumpage fees charged for timber cut on Crown lands to help ease operational costs of New Brunswick lumbermen for the 1949-50 cutting season have been announced in New Brunswick, with reductions applying generally to both softwoods and hardwoods, average rating of stumping being one dollar.

MAINE RESOURCES CONFERENCE, ORONO, ME., NOVEMBER 4

Presentation of Keys—Left to Right: The Hon. Frederick G. Payne, Governor of Maine; President Arthur A. Hauck; Arthur L. Deering, dean of agriculture; Hon. Samuel W. Collins; Paul Cloke, dean of the college of technology; and Reverend Charles E. O'Connor.

Panel on Utilization of Wood—Picture at left—Left to Right: Charles F. Cummings of C. B. Cummings & Sons Co., Norway; A. D. Nutting, forestry commissioner, State of Maine, Augusta; Gregory Baker, associate professor of forestry, University of Maine; David W. Allen of the Disston Co., Brownville . . . Picture at right—Left to Right: Harry W. Gehm, technical adviser, National Council for Stream Improvement, Inc., New York; Thomas G. Mangan of the International Paper Co., Chisholm; Edward L. Lamb of the Oxford Paper Co., Rumford; and Clifford Patch of the Eastern Corp., South Brewer.

Left: Plant Science Building at University of Maine . . . Right: Engineering Building at University of Maine, housing Civil and mechanical engineering, geology, and highway testing work . . . Both buildings were dedicated on November 5.

Clinton County Tree Farm Day

DETROIT—At an all-day program at a nearby Clinton County farm, the tree farm system in the Lower Peninsula was unfolded recently to 148 land owners who pledged to operate 120,000 acres of private woodlands to obtain maximum production and full utilization of periodical harvesting. Governor Williams presented tree farm certificates to Harold and Richard Yanz and by proxy to the others. Francis Kiefer, Port Huron paper manufacturer, emphasized that timber production is "a job for free enterprise." Another enthusiastic speaker was Congressman Albert Engel of Muskegon who is reforesting 1,000 acres near Flint.

Bentley RCI Lecturer

TORONTO — The first in this year's series of lectures sponsored by the Royal Canadian Institute was given by A. W. Bentley, consultant on forest management for the firm of Bowater's Newfoundland Pulp and Paper Mills, Ltd., who spoke on "Forestry in Newfoundland" on November 18. The early history of Canada's newest province was traced by Mr. Bentley in a lecture illustrated by sound motion pictures in color.

Mich. Officials Push Reforestation

LANSING, Mich.—At the meeting here November 7 between Governor Williams and the State Conservation Commission, the governor urged the Commission "to push to the limit" the reforestation program. It is the governor's plan to double the state's production of seedlings if it acquires the nursery at Manistique. Director of Conservation P. J. Hoffmaster came out strong for more planting, also.

Urge Farmers to Do Own Logging

WASHINGTON—Northeastern farmers having woodlots were advised to "do their own logging" by the Forest Service of the Agriculture Department, in a bulletin issued by the service entitled "Logging Farm Forest Crops in the Northeast." The bulletin is the work of Fred C. Simmons, logging specialist of the Northeastern Forest Experiment Station, Upper Darby, Pa.

Bethel Associate Forestry Professor

RALEIGH, N. C.—Dr. James Samuel Bethel, former plant manager of the Tidewater Plywood Co., Brunswick, Ga., has been named associate professor of forestry at N. C. State College, Dr. Richard J. Preston, Jr., director of the College's division of forestry, reports.

Saberson Addresses Student Engineers

DULUTH—The American forest industry will soon grow trees as fast as it uses them, R. E. Saberson, St. Paul trade manager of the Weyerhausauer Sales Co., said here November 4, speaking before a meeting of the Northwestern Federation of Student Engineers.

CONVERTERS

FTC Issues Ad-Seal-It Order

WASHINGTON.—The Federal Trade Commission on November 26 issued an order prohibiting Henry J. Taylor, trading as The Package Advertising Co., 230 Park Avenue, New York, from coercing and inducing other manufacturers into license agreements under which they are required to sell unpatented waxed paper bands, used in connection with the wrapping of bread and other bakery products, at uniform minimum prices established by Taylor.

Under his own trade-mark "Ad-Seal-It," Mr. Taylor makes and sells printed waxed paper inserts and outserts which are used by bakers for advertising media in connection with transparent wrappers, and he purportedly licensed other waxed paper manufacturers to do the same on a royalty basis, the Commission found.

Mr. Taylor owned two patents, according to the findings, one covering the method of applying the bands to the wrappers and the other covering the package resulting from use of the method patent.

Although Taylor's license agreements with the manufacturers were predicated upon his ownership of these patents, the Commission found that he has never owned any patent right which gave him control over the manufacture and sale of Ad-Seal-It bands.

The findings state that "none of the licensees . . . have ever used the methods covered by respondent's patents, nor have any of such licensees ever granted any oral or written sub-license to anyone to use such methods in the packaging of bread and other bakery products. The licensees were generally aware of the existence of respondent's patents but were unfamiliar with the nature of the patents."

Mr. Taylor granted non-exclusive licenses, the findings continue, to some 30 manufacturers to make Ad-Seal-It bands and sell them in the States east of the Rocky Mountains at uniform minimum prices he established in three zones. In addition, the Western Waxed Paper Co., a division of the Crown-Zellerbach Corp., San Francisco, was granted similar non-exclusive rights in the same territory and also exclusive rights in California, Oregon, Washington, Idaho, Utah, Nevada, Arizona, and Montana, the Commission found. The Commission noted that Mr. Taylor did not fix the prices at which the Western Waxed Paper Co., was required to sell the bands in its exclusive territory.

The findings estimate that Mr. Taylor's licensees paid him about $1,300,000 in royalties in the years 1931-45.

The Commission found that the agreements entered into with non-exclusive licensees provided, among other things, that they would not sell Ad-Seal-It bands, which were required to bear a patent notice and the trademarked name, at prices less than those fixed by Mr. Taylor; would furnish him with duplicates of all invoices of sales, and permit inspection of their books and records; would restrict sales to their designated territory, and pay a specified sum if they violated the terms of the agreements.

Under the exclusive license granted the Western Waxed Paper Co., its far-western territory was protected from "invasion" by competing manufacturers, according to the findings, and Western was allowed "to impound all royalties due until respondent eliminated 'outlaw bands'."

Some manufacturers of printed waxed paper bands, the Commission said, entered into the agreements because of the respondent's threats of patent infringement suits, and others did so because of inducements in the form of a higher and uniform price structure on Ad-Seal-It bands.

The prices at which non-exclusive licensees were required to sell Ad-Seal-It bands were substantially higher than the prices charged by non-licensed manufacturers for their own bands, the findings assert.

The Commission said that price competition between Mr. Taylor and the other manufacturers has been substantially eliminated as a result of the uniform minimum prices he established and maintained, and that, because of the territorial restrictions imposed upon his licensees, the manufacturers have been prevented from selling in the exclusive territory of the Western Waxed Paper Co.

The consequence of these practices, the Commission concluded, "is to tend to create a monopoly in respondent in the interstate sale and distribution of unpatented printed waxed paper bands."

All the Commissioners participated in the order, which was issued after consideration of the record in the case, including testimony and other evidence in support of and in opposition to the complaint, the recommended decision of the trial examiner and exceptions thereto, and briefs and oral arguments of counsel.

Plastics Specialties Co., Operating

TRENTON, Mich.—Plastics Specialties Co., a new organization which will produce a range of resin treated materials, has been formed and is now in production, according to T. Walter Noble, general manager.

The new firm has a working staff experienced in the production of resin treated materials and will work with papers, fabrics, sheetings, Fiberglas cloth and mat in combination with such resins as melamine, phenolic, cresylic and certain types of polyester resins. Of particular interest to the new organization is a group of melamine resin impregnated products including translucent overlays, printed decorative patterns, solid colors, and backing paper which are being produced. This type of material will find

application by being processed further by the firm's customers into conventional laminates for bar, counter and table top applications, as well as such specialty items as trays, plaques, and wallboards. The company also plans to produce materials treated to specification for such applications as filter media, radio parts, aircraft tooling, et cetera. They will market their resin impregnated material under the trade-name "Lamiply" with the designation "Lamiply M" for the melamine resin impregnated grades.

The company occupies a new building erected to prescribed specifications and requirements, and is furnished with equipment of the latest and most functional design.

Mr. Noble, who has been general manager and technical director of the Morart Gravure Corp., Holyoke, Mass., is a member of the Society of Plastics Engineers and served in 1947 as president of the Detroit section of that organization. He is also a member of the president's committee of the Society of the Plastics Industry.

Fiber Milk Containers

HARRISBURG, Pa.—The Pennsylvania Supreme Court on November 21 upheld the right of milk companies to use fiber containers for delivering milk, reversing the part of a Washington County Common Pleas Court decree forbidding such sale in the City of Washington, Pa.

The case grew out of an ordinance passed more than two years ago by the Washington (Pa.) Board of Health, outlawing fiber containers for milk.

The Board had approved the use of such containers July 30, but two days later yielded to pressure from the City Council after protests from the A. F. of L. Glass Bottle Blowers Ass'n.

The switch was the second by the Board, which had outlawed the paper bottles in April, then permitted them when only the four dairies there opposed them at a hearing in July.

A heated race for mayor was going on at the time, and both candidates took part in the Council session, one being mayor and the other a councilman.

With six glass companies in the city, it was generally conceded that any candidate fought by the glass union would have little chance to win.

Feaver, Sherman Industrial Sales Mgr.

UPPER NEWTON FALLS, Mass.—John H. Feaver has been appointed industrial sales manager of the Sherman Paper Products Corp.

Mr. Feaver is also president of the Susquehanna Paper & Box Corp., Williamsport, Pa.

Midland in New Home

ST. LOUIS—Midland Products, Inc., flexible tubing and paper specialties, is now in its own new building on the Missouri-Pacific tracks at 4417 Oleatha avenue, J. E. Feldhaus reports.

Union Bag Moving Hudson Falls Plant

HUDSON FALLS, N. Y. — Officials of the Union Bag & Paper Corp., on November 10, confirmed the report that the local bag factory is to be moved to the Fenimore plant and the Scutan branch to Savannah, Ga., in a communication to all departments here.

At a recent meeting, it was decided to proceed with the moving program to the Fenimore buildings without waiting for the actual sale of the properties on the Hudson Falls side of the river. Several months will be required to renovate and alter the Fenimore buildings and install power, light and heating facilities, all of which must be done before the bag machines and printing equipment can be moved.

The first contract has been awarded to the Kingsbury Construction Co., which has started alterations at the old Fenimore mill. When completed this will be the new cellophane bag machine room.

Supreme Court Denies Review Plea

WASHINGTON — The United States Supreme Court has denied the Paper Container Mfg. Co., a hearing in a dispute over fees and costs involved in a patent infringement suit filed in 1939 by the Dixie Cup Co.

Paper Container asked the court to review a judgment by the U. S. Circuit Court in Chicago. The judgment denied to the company any award of master's fees, attorney's fees, court reporter's charges, and costs of about $200,000 in the case.

The prolonged litigation resulted in a finding that Paper Container had infringed a patent known as the Smith and Bild patent.

MERCHANTS . . . .

Tinker Addresses Baldwin Round Table

NEW YORK—Commending the accuracy of the prediction for the paper industry in 1949 which D. C. Everest, president of the Marathon Corp., New York, made at the APPA Convention last February as being "generally correct," E. W. Tinker, executive secretary of APPA addressed the Baldwin Round Table Club luncheon at the Wedgewood Room in the Waldorf-Astoria hotel on November 23. The luncheon, sponsored by Samuel S. Himmell, president of the Baldwin Paper Co., registered an attendance of some 450 customers, mill men and other friends of the Baldwin organization.

Some 50 paper mill men were included in the gathering, with the following among those on the dais in addition to Mr. Tinker: Roy K. Ferguson, president and board chairman; B. R. Cancell and E. G. Murray, vice-presidents; and Wm. H. Donaldson, Jr., sales representative of the St. Regis Paper Co.; Joseph A. Moses, vice-president and sales manager, Falulah Paper Co.; Edson S. Dunbar, sales manager, Crocker-McElwain Paper Co.; J. R. Cryan, assistant sales manager, Fraser Paper Co.; and the following paper mill sales representatives —Lamar M. Fearing, International Paper Co.; Philip C. Batzle, Martin Cantine Co.; W. C. Charlton, Mead Sales Co., Charles A. Gordon, Oxford Paper Co.; and Lawrence Stedman, Kimberly-Clark Corp.

Raconteur Harry Hershfield of "Can You Top This" radio fame entertained with a fast ten minutes of his inimitable gagging, and Wm. Feather, who puts out the "Baldwin Sells" house organ, spoke briefly of a book he wrote and which has been published by Simon & Schuster.

Sorg Names 11 Koverite Distributors

MIDDLETOWN, Ohio—The Sorg Paper Co. has named the following as stocking distributors of its new line of Koverite: Service Paper Co., Racine, Wis.; Anchor Paper Co., Cincinnati; Chas. F. Hubbs Co., New York; Hubbs & Corning Co., Baltimore; Morris Paper Co., Pittsburgh; Morris Paper Co., Johnstown, Pa.; Hanchett Paper Co., Chicago; F. W. Lotz Paper Co., Dayton, Ohio; Buckeye Paper Products Co., Middletown, Ohio; Central Ohio Paper Co., Columbus, Ohio, and Pollock Paper Co., Dallas.

Koverite is a new type baked, plastic surfaced paper in a range of brilliant colors, intended for use as a decorative, protective covering for counters, shelves and windows.

Greenough-Judge Partnership

HOLYOKE, Mass. — Alvin R. Greenough of Springfield has entered into partnership with Mrs. Mary C. Judge to form the Judge & Greenough Paper Co., at 139 Main street, with facilities for distributing paper and paper products. Founded in 1885 as the Martin J. Judge Paper Co., the Holyoke firm has been known since the founder's death as the Judge Paper Co. Mr. Greenough has been in the paper business for 27 years. He formerly was associated with the Carter-Rice Co., Corp., Boston.

Baxter Paper Co., Grover Branch

GROVER, N. C. — Baxter Paper Co., Paterson, N. J., manufacturer of jacquard cards, will establish a branch here in a building for which ground has been broken and which should be completed about March 1.

New equipment for card cutting now is being tested in the Paterson plant and will be shipped to Grover as soon as the building there is ready to receive it.

Lone Star Co., Incorporated

AUSTIN, Texas—Lone Star Paper Co., Inc., merchandise, has been incorporated with authorized capital stock of $60,000. Incorporators are Fan G. Leo, John H. Leo and W. Noel Evans.

Growdon Grows Larger

FRESNO, Calif. — Growdon Brothers Paper Co., is now in new and larger quarters at 1600 H street.

Pioneer Adding Parking Area

ST. LOUIS—Pioneer Paper Co., which moved to 2311 Chestnut street about a year ago, has purchased the adjoining lot at the northeast corner of Chestnut and Twenty-third streets. A filling station now on the lot will be demolished to make way for customer parking area.

Zellen Ups Kopen

CLEVELAND — John L. Kopen has been named general sales manager of the fine paper department of the Zellen Paper Co. The firm is moving from 1714 Woodland avenue to new and larger quarters at 2108 Woodland avenue, Harold and Sidney Zellen, partners, state.

White Star Incorporated

DOVER, Del.—White Star Paper Co., paper products, has been incorporated with capital listed at $200,000. The Corporation Trust Co., Wilmington, Del., is serving as the principal office.

Dixie Firm Incorporated

LOUISVILLE, Ky. — Dixie Paper & Cordage Co., Inc., has been chartered with authorized capital stock of $9,000. Incorporators are William L. Pollock, S. Fred Fuchs and Jewell T. Leek.

Monmouth Buys Raritan Tract

RARITAN TOWNSHIP, N. J. — Monmouth Paper Supply Co., wholesale distributor of towels, cups and napkins, has purchased a 17,000-square-foot tract of land here.

Reliance Co., in New Quarters

Reliance Paper & Twine Co., is now located at 47-15 Pearson place in a four-story building having 88,000 square feet of floor space.

Golding to West 28th Street

NEW YORK—The Golding Paper Co., has moved from 321 Broadway to larger quarters at 42 West 28th street.

Havelaar Chicago Veep

CHICAGO—W. C. Havelaar has been elected vice-president of the Chicago Paper Co., 801 South Wells street.

MISCELLANY . . . .

Folding Paper Box Weight Study

CHICAGO—A study of shipping practices relating to weight densities of folding carton bundles and containers has been undertaken by the Folding Paper Box Ass'n., of America.

Several Association members have been making investigations along these lines on an individual basis. To consolidate these efforts and proceed on an industry-wide front, Association President M. G. Fessenden has appointed a task committee to study the results obtained. These will be combined with the subsequent results of the committee activities in a report to the membership. It is expected that methods will be developed to reduce costs and other transportation difficulties.

ALLYN C. BEARDSELL

—named to the staff of Container Laboratories, Inc., New York, San Francisco and Chicago . . . He was formerly headquarters supervisor of merchandise packaging and warehouse methods, Western Electric Co.

Newsprint Roll A-Bomb Shelter

CHICAGO—The *Chicago Tribune* disclosed on November 13 that rolls of newsprint would bulwark atom-bomb shelters in Tribune Tower in event of an A-bomb assault on Chicago.

An accompanying drawing showed how the paper rolls would be distributed in 30 shelter areas in the 36-story Tribune Tower and adjacent radio station WGN on North Michigan avenue.

Atomic scientists studied the shelters, the *Tribune* said, and gave this view:

That the shelters would "afford good protection against blast, heat and radiological penetration from an atomic bomb explosion, provided the bomb does not hit within a crucial radius."

"It was not assumed," the *Tribune* explained, "that the shelters would provide protection in the event of a direct hit * * *."

One scientist advised the planners to "get as much mass as you can between you and the explosion."

Col. Robert R. McCormick, *Tribune* editor and publisher, arranged to have the *Tribune's* mills at Thorold, Ont., turn out a roll which would be easier to move through doors to the shelter sites than the kind regularly used by the newspaper.

Reynolds, Kendall Assistant

NEW YORK—Frederic C. Reynolds has been named assistant to Victor R. Kendall, vice-president and director of sales of the Diamond Match Co.

Mr. Reynolds joined Diamond's B-F-D Co. in 1939.

Pakistan Raw Jute Price Floor

WASHINGTON — An official notification by the Pakistan Government, reported by the Pakistan Embassy news office here, prohibits transactions in raw jute below specified minimum prices in that country.

The minimum price named is 23 rupees per "maund" of loose jute of jat bottoms quality, delivered at baling centers (ED. NOTE: A maund is a measure of weight differing in various localities). Minimum prices for other grades of jute have been adjusted proportionately. The prices take effect immediately, it is announced, and remain in force until June 30, 1950. The minimum prices are applicable at all baling centers throughout East Bengal, it was stated. They were framed in accordance with a Jute Ordinance of 1949. "Since there is scope for a reduction in exporters' profits, it is anticipated that appropriate adjustments will be made voluntarily," said the announcement. "However, if adequate reductions are not forthcoming, the Government would also be prepared to regulate their prices."

Can. Tax Controversy of the Year

CORNER BROOK, N. F.—The mammoth Bowater Pulp & Paper Mills have become the center of Canada's tax controversy of the year, as a result of Newfoundland having recently become the tenth Province of Canada.

When Newfoundland operated its affairs as a British Colony it entered into an agreement with Bowater whereby the big mill paid a flat annual fee of $150,000 in lieu of taxes. As a Canadian Province, Newfoundland industry is, of course, liable to corporation tax.

While Federal authorities have failed to come forward with a statement, presumably because they consider that Bowater will be obliged automatically to pay the corporation tax, one Member of Parliament for Newfoundland recently stated that any change in the status quo would be a violation of the contract entered into between the company and the Government of Newfoundland. Informed circles anticipate a solution within a month, with a mutually acceptable one expected.

Ind. Dev. Bank Sept. 30 Position

OTTAWA—The Industrial Development Bank of Canada reports that as at September 30, current authorizations amounted to $4,100,700 and amount outstanding as $3,725,248 for the paper products industry, including pulp, and current authorizations of $3,924,159 and amount outstanding as $3,087,649 for the wood products industry.

Norwegian September Exports

WASHINGTON — The year's Norwegian exports through September included pulp and paper valued at 413,000,000 Kroner, the Norwegian News Service reported for the week ending November 12.

1929-49 Balance Sheets Compared

TORONTO, ONT.—Comparison of the latest balance sheets of some of the pulp and paper companies with those of 1929 reveal how salient factors in the companies' affairs have changed, R. Goldwin Smith, financial writer, points out in the *Daily Star*.

Effective assets have grown, notably working assets. Efficiency of plants has been raised, so that mills have been producing at times far above rated capacities. Obsolete mills in some instances have been written off.

This explains why fixed assets of some companies, before depreciation and depletion, have been reduced materially. One of the most striking items is the heavy depreciation and depletion allowances.

Abitibi Power & Paper Co., between 1929 and the beginning of the current year set aside $36,000,000 for reserves, bringing the total to $69,218,750. As at June 30 this year the company had $9,136,872 more net working capital, its funded debt was reduced by $12,312,500 and the preferred stock outstanding has been cut by $5,975,360.

Great Lakes Paper Co.'s depreciation and depletion account rose from $170,726 in 1929 to $10,951,971 at the beginning of 1949. Net working capital increased nearly six times and funded debt was reduced by almost $4,000,000. The number of preferred shares was increased by 178,850.

Bathurst Power & Paper Co. reserves were raised from $569,950 to $7,575,138 and net working capital increased almost four times to $7,940,133. The funded debt last January 1 stood at $15,240,000 against nothing in 1929.

Howard Smith Paper Mills multiplied its net working capital four and one-half fold since 1929 and its fixed assets, before depreciation, rose from $15,460,710 to $40,291,777, while reserves against these grew from $350,000 to $20,666,532. The funded debt grew by $1,200,000 and the preferred stock by $3,500,000.

Minnesota & Ontario Co. had about $2,500,000 more net working capital at the beginning of this year than 19 years ago while bonded indebtedness was cut from $29,900,000 to $2,526,150. Preferred stock was reduced by $3,756,000 to nothing.

Fraser Companies, Ltd., doubled its working capital, increased fixed assets, before reserves, by $10,000,000 and its reserves from $2,669,611 to $25,365,107. The funded debt was pared by $13,572,200. The preferred stock outstanding was $5,000,000 at the start of 1949, whereas none was outstanding at the end of 1929.

Price Bros. & Co. multiplied its net working capital five-fold to $25,409,780 and increased its fixed assets by nearly $11,000,000. Reserves were stepped up from $7,246,719 to $38,917,397. The funded debt was pared by $3,000,000 and the senior stock was reduced by $1,731,400.

Consolidated Paper Corp., this year is compared with its predecessor of 1929—Canada Power & Paper Co. The gain in net working capital is $4,563,003, its funded debt was cut from $112,904,150 to $31,547,000. Reserves against fixed assets in 1929 stood at $17,173,456, whereas at the beginning of this year they were $53,373,948.

Canadian industries, generally speaking, are in a better position now than they were in 1929. The changes have been notable and this is of prime interest to investors. Equities have been built up substantially behind ordinary shares in many instances and added to this stability is earnings potential that was not known in earlier years.

Late in 1929 the very foundations of some of Canada's large industries gave way. Some went to the wall and others had to undergo drastic reorganization. Among the worst hit was the pulp and paper industry. This, despite the fact it had great timber resources, cheap power and the world's biggest market near at hand. One root of the trouble was the competitive race in building and equipping newsprint plants during the late 1920's, until capacity was reached years ahead of consumption. Now demand is equal to supply, and care has been taken by the industry and by the provincial governments to keep the industry healthy.

Japanese Paper Combine Broken Up

NEW YORK—When K. Ashina, liaison manager of the Jujo Paper Mfg. Co., Ltd., Tokyo, Japan, sent a number of corrections to *Paper Trade Journal* (published in the October 6 issue in connection with the *Paper Trade Journal* story entitled "Japanese Paper Combine Broken Up" which appeared in the August 11 issue, he overlooked sending all of the data he had assembled. To rectify this inadvertance he wrote on November 7, as follows:

"We highly appreciate your kindness in having had our corrections inserted in the October 6 issue of *Paper Trade Journal*. However, we found that the second page of the tabulation of correction enclosed with our letter of September 19 (Ref. No. 21) was inadvertently omitted. Furthermore, in your tabulation published under the heading of Mr. Ashina's Corrections, the name of our firm is misspelt as Jugo."

The tabulation which accompanied the above letter is shown herewith.

Mr. Aschina's Correction

Page	Col.	Paragraph	Quotation from P. T. J., August 11, 1949, issue	Correction
52	1st	5th	*57* paper machines	*59* paper machines
52	1st	5th	*72* grinders with a monthly capacity of *34,114,000* lbs.	*92* grinders with a monthly capacity of *36,686,000* lbs.
52	1st	6th	annual prewar paper making capacity of *1,575,000,000* lbs.	annual prewar paper making capacity of *1,776,000,000* lbs.
52	2nd	1st	Paper was sold at *256 Yen* per U. S. dollar	Paper was sold at Y350 (in the case of foreign style paper) and Y450 (machine made Japanese style paper) per U. S. dollar
52	2nd	2nd or 1st	the paper industry is quite happy with 360 Yen	This remark is rather misleading, as the paper industry of this country is not actually happy with this rate at present

ACCL Elects Eight

HOBOKEN, N. J.—Dr. Bernard L. Oser, president of the American Council of Commercial Laboratories, Inc., and Lewis Herron, chairman of the membership committee, report the election of eight new members of the Council, as follows:

Albert L. Chaney Chemical Laboratory, Glendale 6, Calif., Dr. Albert L. Chaney, president; Curtis & Tompkins, Ltd., San Francisco 11, P. W. Tompkins, president; Experiment, Inc., Richmond 2, Va., Dr. James W. Mullen II, president; George W. Gooch Laboratories, Ltd., Los Angeles 23; Hazleton Laboratories, Falls Church, Va., Dr. Lloyd W. Hazelton, president; La-Wall & Harrisson, Philadelphia 3, Dr. Joseph W. E. Harrisson, president; Tulsa Testing Laboratory, Tulsa, Okla., James B. Davis, director; and A. W. Williams Inspection Co., Mobile 3, Ala., A. W. Williams, president.

With these additions, the Council comprises 49 laboratories. The office of the executive secretary is in Washington, D. C.

N. C. Cuts Accidents 15 Percent

RALEIGH, N. C.—The industrial accident rate in the pulp and paper mills in North Carolina during 1948 was down 15 percent from 1947, Commissioner of Labor Forrest H. Schuford reports. He attributes this improvement to the "active cooperation we are receiving from both labor and management" in advancing the Department of Labor's manpower conservation program. The department's advisory board of 24 industrial safety engineers have been very helpful in planning safety drives in hazardous industries, he said.

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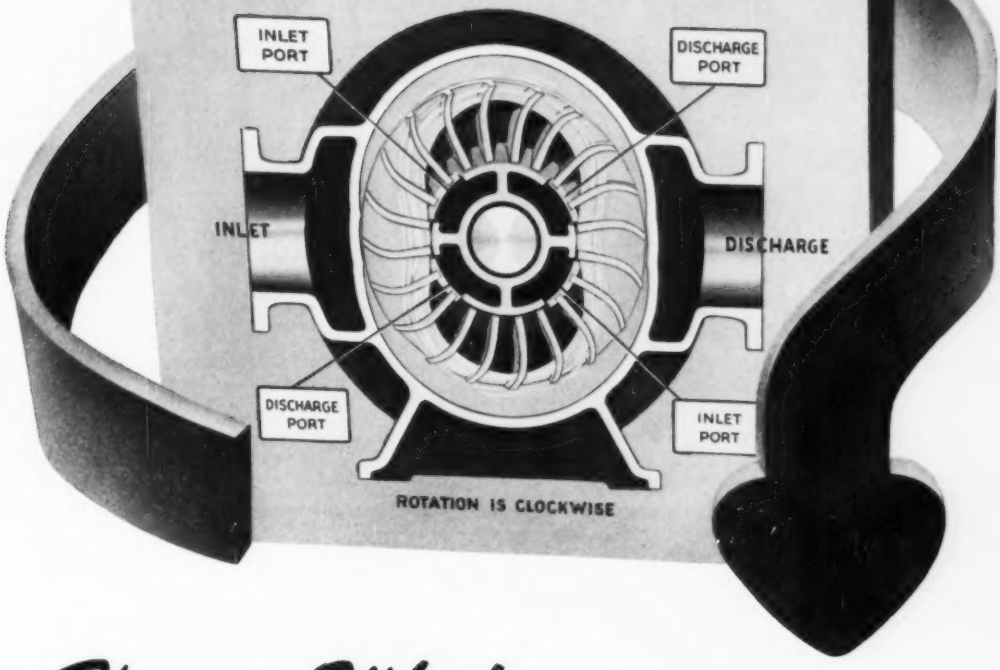

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A Unique Partnership[1]

By DR. WESTBROOK STEELE[2]

Using the title of my talk, "A Unique Partnership," as a point of departure, let us examine the precise meaning of the word partnership and the delicate though tremendously important nuances inherent in the term. Associates are hibitually together; companions only occasionally. Many people may be companions who would not be fit as associates. Partnerships are the result of a common purpose; are motivated by a mutual objective.

Partnerships are entered into with the conviction that each partner selected has a contribution to make to the achievement of the goal, and in the belief that he will carry his share of the common burden. Because each partner has virtual control over the combined assets of the partnership, on the integrity of each depends the safety of the whole. Partnership duration depends not only on the chances of trade, but the compatibility of the individuals and their ability to cooperate. Many are acceptable as companions, some desirable as associates, few as partners.

One of my close associates often has said that companies engaged in the same line of endeavor differed not at all on holidays or Sundays. They have the same type of machinery; they have the same type of inventories. He contends that the thing that makes them different on Monday is *men* — the individuals, their personalities, their hopes, their ambitions, their training, and their loyalty.

Speaking generally, people do not invest in ideas. They invest in men who, in turn, have ideas. They invest in men who have a capacity for using ideas in the use and conversion of resources and raw materials into products which can be sold and used profitably.

All of us here today have a common interest — paper as a product and the welfare of the paper industry. Paper as paper has no value. Paper derives its value from its ability to preserve, to transport or to transmit ideas or things. Its economic and/or social value increases or decreases in direct proportion to its ability to perform such functions. It therefore follows logically that the industry in which we are interested, and to whose destiny our collectively is so firmly joined, is in vigorous competition with all other industries and products to effectively perform this social-economic function.

Anyone examining our industry objectively must be struck with the fact that society's need for paper and paper products always has exceeded supply. This has been true even during times of recession or depression. Mind you, I said *need*, not temporary demand.

Similarly, a research into the end uses of paper, common or peculiar then, and those which are common now, will demonstrate the social-economic impart of our industry.

On all sides, particularly from government and realistic economists, we hear the plaint that the answer to the inflationary spiral is to produce more and more. Certainly, the history of our industry validates that argument. But our industrial history injects another factor into the equation about which, in the main, most publicists and politicians are silent. Production, of itself, is but a partial answer. Money as it was early defined is a medium of exchanging stored up productive energy. Capital, therefore, may be looked upon as the accumulated stored-up energy which is available for rental. The objective of available capital rental is profit. All manufacturing operations require the procurement of raw materials and their conversion by means of productive energy either in the form of manpower or machine power into products which may be distributed at a price which will return the investments in raw materials, the investment in equipment, the investments in conversion, the investment in administration, the rental of capital, and the investment in distribution *plus* a profit. The returns including the profit may be recycled into more raw materials, more conversion, more distribution, and more profit, until the saturation point comes into view. Then it becomes necessary, if the expanding cycle is to be maintained, to develop other end products or co-products which can be produced from the same, similar, or available raw materials adaptable to conversion which may readily and profitably be distributed to or through outlets with which acquaintanceship and reputation already have been established.

Research and development unused, or unprofitably applied, could result in bankruptcy. Naturally, the conversion of natural resources or use of productive energy in unusable or unwanted products could result in insolvency. Certainly consistent distribution of produced materials at a price below cost of production would irretrievably dissipate resources, capital, and current productive energy. Unquestionably, management, no matter how ingenious, alone could not be responsible for the result. It required a combination of functions, all interrelated, but individual in responsibility. Today, as always, these spheres of responsibility require mental vigor specifically applied within the areas of specialized experiences or training.

Management and distribution constitute the armor plate for an industry. Behind their advocacy, ideas may be brought to fruit. Upon their capacity for exchanging the resulting products for good accounts receivable the continued profitably productive life of the industry depends.

Most of the important industries of our country have been based upon the arts and on individual craftsmanship. As production demands have been increased, the necessity for utilizing machinery to augment individual effort has been emphasized. Thus, increasing demand has been attended by a gradual transition from an industry dominated by the arts to one that is scientifically controlled. This transition must be accelerated if the uniform products to fulfill precise end-use requirements are to be manufactured, and if the effect of increasing cost of labor and materials is to be minimized in our product cost.

Mr. Mahler has often said, "We are inclined to think of the future in terms of materials and machinery. In the final analysis, however, an industry's success is dependent upon the wisdom and stature of the men who comprise it. While industries compete in service and products, their ultimate competition is for manpower. The paper industry must see that it gets at least its share of outstanding young men, wherever they may live or whatever their previous interests may have been. If we shall succeed in this, we shall succeed in all else."

Recognizing this as a fact, and with rare industrial statesmanship, the interested and progressive segments of our industry banded together to create a facility for the selection and training of men for their industry. With deliberation and careful planning, they formed the first effective partnership between education and an industry. That was 20 years ago. That partnership was and is called The Institute of Paper Chemistry. Education is its main purpose. It is a graduate school training men for the pulp and paper industry. These men are not necessarily to be research men, but men scientifically trained; men who have demonstrated their ability to perform the research function; men who are acquainted with research techniques; men who recognize the rewards and hazards of research; men who have been taught how research as a tool may be used through the pulp and paper industry, in the service of society. It is believed that men so trained will provide a bridge between scientific knowledge, research activity, and the production needs of the industry. It is believed that the rigorous educational program will lead the men so trained to utilize their skills in the preferred areas dictated by their personality traits — in research, sales, in production, or in administration. It is from men so trained that we expect the future training cadre of our industry can be drawn.

The Institute's secondary purpose is to serve as a research center where problems of the pulp and paper industry may be prosecuted. The personnel and equipment facilities which have been assembled at the Institute

[1] Excerpted from an address to the members of the Southwestern Paper Merchants Ass'n., at the Shamrock Hotel, Houston, Texas, October 27, 1949.

[2] Dr. Steele is executive director of the Institute of Paper Chemistry, Appleton, Wis.

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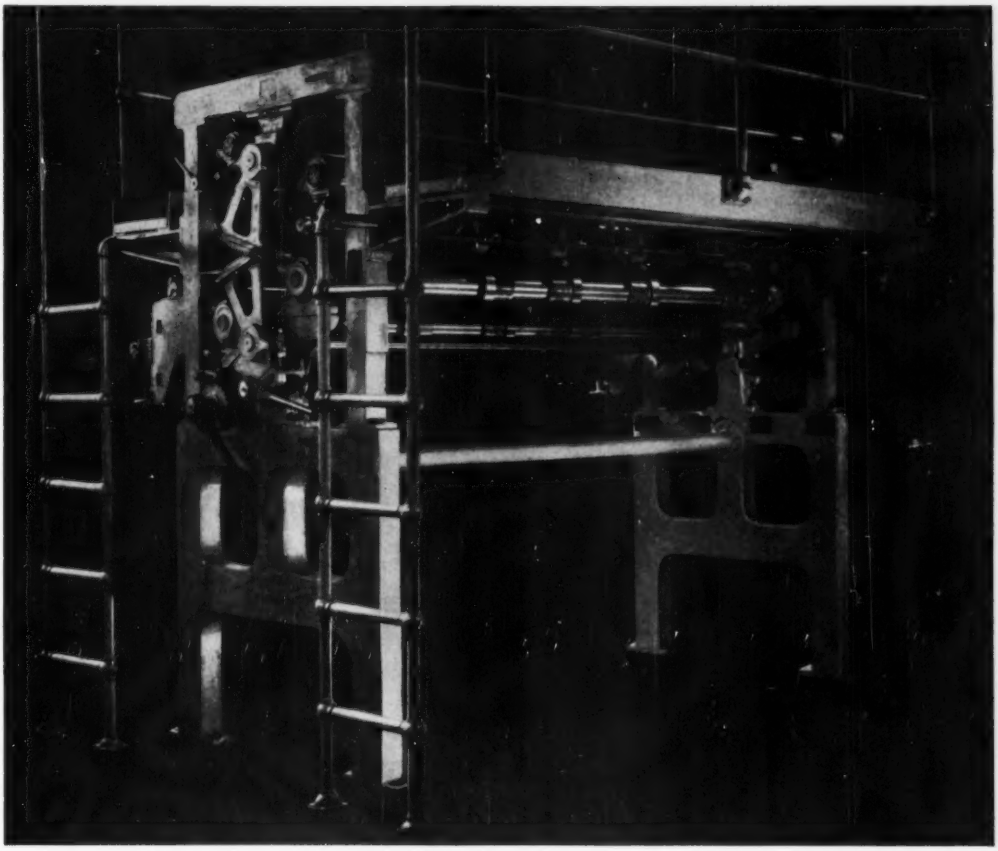
Moore & White DUPLEX SLITTER



This slitter is built of box section frames, for hard continuous operation, and will efficiently handle 95 percent of the grades of paper and paperboard manufactured today. The unit can be operated with practically any type of sheeting equipment where fast change-over from one sheet-width to another is required. It eliminates shutdown time when changing sheet-width and also reduces waste due to resetting of slitters.

This unit, when combined with our new rotary sheet-cutters, permits continuous sheet operation. Changes of width and length of sizes are made without shutting down the combined units. The change-over from one slitter section to the other is fast, simple, and accurate.

Positive throwout of top slitter blades is accomplished through the use of a handle on each slitter section. One quarter-turn of the handle moves all blades in the section either in or out of normal operating position.

The slitter may be driven separately, from the sheet cutter, or direct from the paper machine line shaft. Each section is driven as a separate unit, complete with clutch to eliminate shock loads when change-over is made. All moving parts are encased in antifriction bearings.

The speed range of the new Moore & White Duplex Slitter will meet the needs of any sheeting equipment now in operation. It is built to standard widths of 50, 62, 72, 84, 110, and 124 inches. Additional widths are available in sizes to suit your requirements. Write today for complete information.

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are too expensive for any one company, large or small, economically to provide and to maintain for itself. The researches of the Institute are not intended to substitute for the individual companies' research activity, but to supplement them through facilities not otherwise available.

Thirdly, it acquired a comprehensive scientific library comprising all the available literature pertaining to the industry, its chemistry and its processes. This is assurance that the researches undertaken would not retread trails which already have been explored. Expense and energy can be conserved through the available published researches of the past.

Beginning with a budget of $40,000 a year, $50 worth of equipment, and three staff members, the Institute has grown to a staff of over 200, an annual budget of $800,000, and buildings and equipment conservatively valued at $1,750,000. The ratio of faculty to student body, 1 faculty member to 1.7 students, is the highest faculty ratio in any scientific institution in the world. The student body is small, never over 55 in number. Fifteen are admitted each year. The course leading to the Ph.D. degree is four years. Three summers' work in a pulp and/or paper mill is a degree requirement.

All of the students are on scholarship. But the candidates for admission must be recruited. Our deans visit the various campi of the country and have first to sell our industry to the prospective student as an opportunity for a career. To those of us who are acquainted with the industry this may seem strange. *But* we are in it! Then we must select from those who have become interested, those who seem to have the most promise. Reliable educational agencies estimate that each year there are less than 600 men qualified by interest, intelligence, and undergraduate training, from whom in competition with 96 other graduate institutions and untold individual numbers of industrial firms, we must recruit and select 15 men. When you consider that we screen the availables for personality, interest in the industry, leadership, and character, as well as intelligence and pre-requisite academic training, you will better appreciate our recruiting problem.

In retrospect our record is good. In the 10-year period from 1936 to 1945 we granted the Ph.D. degree of 72 out of the national total of 4905. The Institute, out of all the graduate institutions of whatever size, age, or strength, in all branches of science, ranked 44th in the number of Ph.D.'s in science granted during that period. Out of each 100 Ph.D. degrees granted during that period in chemistry, we awarded 1.5. Do you not agree that we got our share?

But we have an ever-present problem to plague us. If you manufacture or convert a bad lot of paper, it may be plowed back as broke, the loss absorbed and forgotten. Or if you manufacture and sell a "lot" of paper which fails to meet the user's need and is rejected, you can replace it; salvage something out of it; and live above or live down the transaction. It soon is forgotten. But with us it is different. An unsatisfactory or poor product, no matter what the actual cause of failure, throughout his lifetime continues to stand as a monument. That *is* a problem!

Actually the Institute is an institution of, by, and for the free enterprise system. It was born of the free enterprise system. It is maintained and completely financed through the free enterprise system. Both students and staff must have contact with the problems of the industry, both scientific and economic. They must have an acquaintance with and knowledge of the history and traditions and processes and materials which comprise its business. They must have an appreciation of the tortuous paths which have been traveled by the pioneers of the field to arrive at the existing empirisms. They must understand the fields of fundamental science which are related to the raw materials their industry uses, the processes through which it passes, the products which result, *and* their use. They must learn to harness scientific phenomena and to develop their application for the benefit of the industry of which they are a part.

Institute graduates are engaged in and with the pulp and paper industry in all sections of the country — in research, in distribution, in production, and in administration. They are making their way.

Since its inception the Institute has handled approximately 1,600 major projects for members and allied industry. Since organization, from staff projects as distinguished from those of members and allied industry, we have developed 153 allowed patents. Others are in process. We have prosecuted 132 Masters Theses of which 75 percent have been published. There have been 100 Ph.D. dissertations of which 90 percent have been published. Our scientific reprints number 575. Our bibliographies, 170, ranging from a few pages to one of 694 pages containing 2,963 annotated abstracts. One hundred and fifty-eight Institute Methods have been circulated. Thirty-eight texts or chapters of definitive works have been published. These are in addition to our monthly Library Notes which currently abstract approximately 200 foreign and domestic scientific publications. Finally, there is our Research Quarterly. Presently, a number of additional tests are in preparation.

Paradoxical as it may seem, the Institute in its relationship to its membership problems is selfless. It seeks no credit for its contribution. It is impersonal to the extent that in the solution to a problem or in any contribution it and its staff may make to a member, it is content to remain anonymous.

Many of our industrial leaders view the future and its problems as representing an era of industrial competition, not among segments of industry, but among the industries which the collective segments comprise. The horizons of the industry must be widened in order that suitable outlets may be found for tremendously increased production. Inevitably, the search for these widened horizons must be founded on knowledge of the use requirement for the end product and the fundamental characteristics of the products that are necessary to fulfill those use requirements. Education of the consumer must be based upon proved facts rather than upon high pressure salesmanship and wish-

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For light-duty duct-mounted ventilation, exhaust and air conditioning service. WRITE FOR BULLETIN 3533-C.

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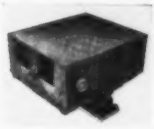

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ful thinking, for the outlets must endure. Because if they are unstable, any planning which relies on the continuance of these outlets will be based upon a fallacy.

The Institute truly is one created by the pulp and paper industry for the pulp and paper industry. It is a nonprofit membership corporation. Its supporting membership is composed of mills producing more than 72 percent of the total United States production of pulp, paper and board. Its management is vested in a board of trustees, members of which are operating executives, actively engaged in the industry. It is an institution born of a long-range policy, not set up to dictate policies. It is designed to discover facts upon which the industry itself or its components may build a future policy, change its actions, change its methods, or develop new ones. The Institute does not desire to set standards for industry; it seeks to be completely competent, to determine the facts for the industry and to leave it to the industry to determine what use it is going to make of the truth.

We believe that the Institute plant and facilities and the investment in it should only be increased if such increase is justified by the needs of the industry, if it is wise for the industry, if it is valuable to the industry. There is an opportunity for everyone engaged in the industry to participate in the Institute program. We believe that the educational ideal is correct; that all of the institutional objectives are sound; and that the method of operation is satisfactory. We believe that the Institute should be strengthened and that it deserves the unanimous support of the industry by whose desire and demand it was created. Educational and research programs are not an answer to a current crisis. However, they can be insurance against future crises. They are no panacea but, cooperatively undertaken, strongly supported, energetically prosecuted, they are the symbol of the vision of a virile industry providing for itself the most essential guarantee for its future vigor — *men, products, markets.*

SUPPLIERS

Drayo Corp., Heating Section, Pittsburgh, points out that mechanical ventilation of industrial structures to remove air contaminated by fumes, dust or gases necessitates another function that is of equal importance, namely, replacing, or making up, the air that has been exhausted from the building. How this can be accomplished efficiently and economically is described in *Drayo Bulletin 520*, an illustrated brochure just published, which is believed to be the first study of its kind. Introduction of clean, fresh "tempered" makeup air into a factory structure, the bulletin explains, has two primary benefits: (1.) Improvement of employe health and morale by elimination of foul air. (2.) Balancing atmospheric pressure inside the building to increase the efficiency of combustion equipment and ventilating systems.

H. G. (GEORGE) HEITZEBERG

—will represent "Paper Trade Journal" and "Lockwood's Directory" in the Mid-West with headquarters in the Chicago office of the Lockwood Trade Journal Co., at 79 West Monroe street starting December 1, 1949 . . . Mr. Heitzeberg brings to both advertisers and advertising agencies in this territory a long experience as a publisher and advertising manager. His recent service as editor of "Paper Trade Journal" fully equips him to aid in sales planning and advertising to this tremendous market.

American Cyanamid Co., new products department reports the introduction for the first time of trial lot quantities of Diallylcyanamide. This new material is a liquid having a boiling point of 222°C. and a freezing point below —70°C. Less than one percent soluble in water at 28°C., Diallylcyanamide is miscible with most organic solvents and acts as a solvent for most natural and synthetic resins. The chemical reactions of Diallylcyanamide are based mainly upon the reactivity of the nitrile group with compounds containing active hydrogen, such as water, amines, alcohols, and hydrogen sulfide. These and other reactions will bear further investigation. In addition to Diallylcyanamide, the dimethyl, diethyl, and diisopropyl cyanamides are also available in experimental quantities. A technical bulletin describing the chemical and physical properties of these compounds is available upon request from the New Product Development Department, American Cyanamid Co., 30 Rockefeller Plaza, New York 20, N. Y.

FAWICK AIRFLEX UPS FOUR

John V. Eakin (left, formerly Southwestern district manager of the Fawick Airflex Co., Inc., has been named assistant sales manager, and J. S. Walsh assistant chief engineer. J. B. Kelley, formerly director of sales and engineering, has left the employ of the company . . . Frank C. Warth (right, has been named Southwestern district manager with offices in Fort Worth, and C. H. Lay, Chicago district manager with offices in Evanston, Ill.

General Electric Co's., Chester H. Lang, vice-president in charge of sales for the apparatus department, said "a creative distribution system is one of industry's finest instruments to reduce costs and increase profits," addressing the 70th annual meeting of the American Society of Mechanical Engineers at Hotel Statler, New York, November 30. Mr. Lang pointed out that effective distribution can be achieved only through the efforts of design, application, and service engineers, advertising men, and salesmen operating under progressive management's leadership.

Hercules Powder Co.'s Charles A. Lambert, manager of the Hattiesburg, Miss., naval stores plant, will retire December 31 and will be succeeded by L. Coleman Hall, formerly plant superintendent. Frank W. Volk, formerly assistant plant superintendent, becomes plant superintendent and Lyle W. Rotheberger, formerly technical assistant to Mr. Hall, becomes assistant plant superintendent.

Westinghouse Electric Corp., Pittsburgh, has named F. P. Taugher manager of engineering for the Industrial Control Division, Buffalo, N. Y., and M. L. Gardner engineering and service manager of the New England district with headquarters in Boston, succeeding Mr. Taugher.

E. I. du Pont de Nemours & Co., Wilmington, Del., has named Joseph B. Dietz manager of the industrial sales section of the finishes division succeeding Henry E. Lackey, who is retiring after a career of nearly 43 years with the firm.

American Car & Foundry Co's., treasurer, James F. Clark, has been elected treasurer of the Shippers' Car Line Corp., a subsidiary of ACF, succeeding J. F. Varcoe, who has retired after 33 years of service.

Bagley & Sewall Co., Watertown, N.Y., has entered into contractural agreement with the Shenango-Penn Mold Co., Dover, Ohio, to manufacture suction rolls for Bagley & Sewall papermaking machines.

More Heating Surface; Fuel Economy Improved!

A-C KILN GIVES CROWN-ZELLERBACH KRAFT MILL THESE BENEFITS:

- **Heat recuperating chain system saves fuel.**
- **Kiln design provides continuity of operation.**
- **Maximum capacity at lowest possible fuel consumption.**

INCREASED KILN CAPACITY was obtained at the Camas, Washington, kraft mill of Crown-Zellerbach corporation with the installation of a new 8 x 120 ft rotary type Allis-Chalmers lime kiln.

Feed end of kiln is equipped with a heat recuperating chain system which efficiently transfers heat from hot gases to wet material. This chain system provides a large heating surface which effects the exchange of heat, gives low flue gas temperature, cuts dust loss.

You can get similar efficiency in your lime sludge recovery with Allis-Chalmers kilns. Design features include: ▸ floating type steel riding rings; ▸ steel rollers; ▸ heat recuperating chain system. Allis-Chalmers kilns are designed to eliminate effects of torsional vibration.

Allis-Chalmers also supplies feeders, slakers, burning equipment, dust collectors and fans, and master control panel equipment. Teamwork of A-C kilns with Allis-Chalmers motors and Texrope V-belt drives provides one manufacturer responsibility for successful operation.

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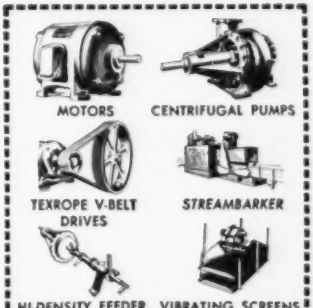

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the Excellent Emulsion Stabilizer

The growing list of synthetic latex and emulsion coating uses for paper and paper board is constantly increasing the demand for Methocel.

As a water soluble thickener, Methocel serves to regulate the body and leveling properties of these coatings. Methocel as a synthetic viscosity regulator insures uniform control and a high resistance to change by chemical or bacterial action. It is odorless, tasteless, physiologically inert and therefore suitable for use in food packaging applications.

Methocel is also used extensively for the sizing and coating of paper and paper board to impart resistance to oils and waxes.

Have you investigated the *new* Methocel, *powdered?*

Write or phone us for further information about Methocel and its many uses in the paper industry. Send for free experimental sample of the *new* METHOCEL, *powdered.*

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THE new *methocel*

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Please send free sample of METHOCEL, for use in_____

Check viscosity desired: 15, 25, 100, 400, 1500, 4000 cps.

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CHEMICALS INDISPENSABLE TO INDUSTRY AND AGRICULTURE

Stream Pollution Problems in the Southeastern United States

By

RUSSELL E. WINGATE

Executive Secretary, National Council for Stream Improvement.

The general subject of my discussion is "stream pollution," with particular reference to pulp and paper industry problems in the southeast including the states of Virginia, North and South Carolina, Tennessee and West Virginia. A brief paper of this nature is probably inadequate to comprehensively cover a subject as complicated technically, and as controversial, from the point of view of the general public, as stream pollution. As a matter of fact, an entire paper could be written on the definition of pollution without satisfying all the various interests involved.

In view of the limitations, it seems advisable to confine myself, insofar as possible, to considerations of direct interest to the mills in the southeast area. The presentation will be based on the following outline.

1. A brief statement of the aims and purposes of the National Council for Stream Improvement.
2. A practical definition of "pollution" as it concerns the pulp and paper industry.
3. A discussion of the specific waste disposal problems of the pulp and paper industry in this region and a description of the research activities of our organization looking towards their solution.
4. A review of state stream pollution control as it affects the mills in this area.

The National Council for Stream Improvement (of the Pulp, Paper and Paperboard Industries), Inc., was organized in 1943 to conduct research looking to the solution of the waste abatement and utilization problems of these industries and to render technical assistance to its members in making the research findings applicable to actual pulp and paper mill operations. The Council was organized by the pulp and paper industry because the executives of the industry recognized the necessity of studying their stream improvement problems and the importance of preserving available water resources for both industrial and public use.

Ours is a national organization representing 85-90 percent of the total pulp, paper and paperboard production in the United States. We operate on an annual budget of $150,000-$160,000 and are entirely independent of any other association in the industry. We are organized to function on a committee basis. Regional pollution problems are evaluated by each of our seven regional committees and committee recommendations for the institution of research projects on regional problems at some qualified research institution contiguous to the area in which the problem occurs, are acted on by the Board of Governors.

Research Activities

In the early days of our activities, the accent was on research as it was necessary to accumulate a background of information in this somewhat new field. With this in mind, research projects based on regional committee recommendations were originated and are still being carried on at ten outstanding research organizations. The roster of research organizations which have been employed by the Council includes the following: Mellon Institute of Industrial Research, where acid and alkaline bleachery wastes and inter-industry pollution problems were studied; Purdue University, carrying on with strawboard waste research instituted two years ago; Rutgers University, engaged in white water problems; University of Michigan and Kalamazoo College, assisting in the study of de-inking waste; Institute of Paper Chemistry, studying aquatic biological problems; Manhattan College, where stream analysis work is centered; Virginia Polytechnic Institute, investigating semi-chemical waste problems; Louisiana State University, currently engaged in studying biological processes applicable to kraft mill waste treatment; and Oregon State College where waste sulfite liquor and aquatic biology problems are being studied.

After some one to three years' research, we find that in a number of cases laboratory developments are indicating solutions to important industry pollution problems. This has made it necessary to expand the Council's activities in two directions. First, it has been necessary to initiate pilot plant operations so that laboratory techniques can be adapted to plant size operations. Second, it has been necessary to make the services of technically trained field men, who are familiar with research and laboratory developments, available for assistance to the mills in each of the different regions so that research accomplishments may be fully utilized and reflected in improved waste disposal practices at member mills. This is a natural and proper development of our program since there would be little point in spending large sums on research if laboratory developments and discoveries were not put to practical use.

Divergent Interests

It seems appropriate to explore what we mean by "pollution" and in so doing we discover that the industrialist, the general public, the conservationist, the sportsmen and the regulatory agency all have somewhat contradictory ideas as to what constitutes pollution. The industrialist feels that the reasonable use of waters for the transportation of waste should not constitute pollution; the general public is interested in having waters available for drinking, bathing and other recreational uses; the conservationist would like to see all the rivers restored to a state of pristine purity, and so would we all, of course; the sportsman is interested primarily in catching fish and the regulatory agency representative is duty bound to support the definition of pollution as specified in the particular legislation under which his office functions.

This conflict of interest makes it necessary to judge almost each particular case by the various factors which are involved and in the final analysis, calls for a very careful analysis of the private and public equities involved in the specific case and a balancing, one against the other, of these equities.

Our organization supports the "reasonable use" concept which is held by many stream sanitation authorities. This is—that the use of a stream for the transportation of wastes is necessary and proper provided that such use does not constitute a menace to public health, does not create a public nuisance and does not prevent the use of the waters for the purpose to which they are normally and customarily put.

Speaking specifically of the different kinds of pollution entering the streams in this region, we can classify it under three general headings: nat-

Presented at the Fall Meeting of the Southeastern Division, American Pulp and Paper Mill Superintendents Association, Roanoke, Virginia.

ural pollution, industrial pollution and pollution from untreated municipal sewage or human wastes.

Natural pollution resulting from silt and decaying vegetation is of far more importance than is generally realized, particularly in the south where in many cases decaying vegetation makes a greater demand on the oxygen in the stream than does either municipal or industrial waste.

Municipal sewage is by far the most important pollution problem since it constitutes a grave menace to public health and contributes greatly to the unsightly and slovenly appearance of the stream.

Industrial waste, or more specifically pulp and paper industry waste, on the other hand, does not constitute a menace to public health although it may operate a public nuisance under adverse stream flow conditions.

To some extent, the presence of industrial waste in streams is more readily excusable than the presence of untreated sewage, since in many cases treatment methods are not available and in some cases where remedial methods are available, the cost of application is almost prohibitive and must be financed through the operating funds of an industry which is traditionally highly competitive. On the other hand, techniques and equipment for treating municipal wastes have been available for many years and the cost of construction can be met through public funds or the relatively modern device of sewer rentals.

Here in the Southeast there are a number of pulping operations producing dissimilar wastes and different waste disposal problems.

Semi-Chemical Pulp Wastes

Mills using semi-chemical processes are fairly numerous in this area and the waste from those processes are characterized by a high B.O.D., a heavy concentration of suspended solids and a strong color. Evaporation and burning techniques and equipment similar to that used on the kraft industry are not available for the waste, so our efforts have been directed towards developing a practical abatement method.

We have studied this waste for some two years at Virginia Polytechnic Institute and so far, the work has consisted of completing a literature survey, and conducting coagulation-filtration studies with various types of lime treatments. The effect of time, temperature, concentration and conditioning chemicals has been investigated and the B.O.D., solids and color determined. Studies on the use of oxygen for stream aeration and experimentation as to methods for direct oxidation have recently been initiated. Currently, the effect on the pollution problem of various methods of cooking and the use of different species of wood is being investigated. The application of a high rate anaerobic digestion process will also be explored.

Kraft Mill Waste

Kraft pulping is of great importance in this area but continuous improvement in recovery methods has reduced polluting materials to the point where under normal conditions of stream flow, the problem should not be severe. It must be recognized that the modern recovery process is in itself the best treatment works that could be devised. However, under certain conditions of unfavorable stream flow, the weak liquors that escape the recovery process may constitute a pollution problem. At Louisiana State University, we have had a project in operation for several years, attempting to determine the fundamental factors influencing the natural purification of kraft mill waste water so that this knowledge can be applied in the development of a dependable treatment process of reasonable cost of installation and operation. The first task was to develop a reliable and reproducible test for oxygen demand of this waste. Following this, the effect of various factors on the purification occurring in storage was investigated. The next step will be to investigate the effect of certain other factors, the bacteriology of the process and the exploration of further means to promote natural purification.

Effect of Pulp Mill Waste on Aquatic Life

A problem of increasing interest in the South is the effect of pulp mill wastes on the aquatic environment. At the Institute of Paper Chemistry, we have sponsored a project for several years to determine the effect of pulp and paper wastes on aquatic life. The principal effort, so far, has been on kraft mill wastes, and we have definitely established, that given a reasonably effective recovery process and moderate dilution in the receiving waters, damage either to fish or to fish food organisms is rare. The work at the Institute this year will cover a phase of kraft mill disposal problem which is becoming of increasing public interest. This is a study of the cause of the production of offensive odors in waters receiving kraft mill wastes. The purpose of this study will be to determine the specific constituents of the waste which cause the odors and to work out methods of controlling odor production.

Another problem, which occurs in almost every mill, is the handling of white water wastes. At Rutgers University, we have had a project in operation for several years in connection with white water problems. Much of the white water research conducted to date has been presented to the industry in the form of Council reports and papers in the trade journals. The studies presented have included results on the effectiveness of a number of established, as well as, novel clarification methods including sedimentation, flotation and filtration techniques. Coagulating chemicals have been evaluated and the best practice pointed out, together with the limitations and advantages of coagulation procedure in general.

Sludge Disposal

A matter of universal interest is that of sludge dewatering and disposal. In the final analysis, almost every treatment process results finally in the production of a highly liquid sludge that must be de-watered to the point where it can be economically disposed of. We have been studying this problem in cooperation with a number of agencies and our findings will be the subject of a report to be published in the near future.

A number of people who are concerned with the practical aspects of mill operation have asked me if the remedial measures that may be required to render mill effluents satisfactory to regulatory authorities will represent a continuing out-of-pocket expense or will there be recoverable values that will tend to offset the initial investment. The answer to this is "yes" and "no."

I have personal knowledge of mills where fiber losses amount to as much as 15% of the fibrous materials in the furnish. I also know of many mills where the fibre loss is less than 1%. Equipment and techniques are available to readily reduce fibre losses to the vicinity of 2% or less. In such cases, the value of fibre recovered will go a long ways towards amortizing the necessary investment. It depends largely on the ability of the mill to use the recoverd fibre without showing the furnish or building up a slime condition. In some cases where the mill operates on warm water, the fuel saving which can be obtained by fairly rapid recirculation and re-use of the white water is considerable.

As far as the recovery and marketing of by-products is concerned, I must say that we take rather a dim view of the possibilities. A number of chemical by-products can be obtained from pulp mill wastes. For most of these however, the market is extremely limited and in many cases, if a number of mills were to attempt to market the same by-products, the price situation would deteriorate to the point where their production could only be carried on at a loss. Also, such exploitation requires that a separate marketing and sales operation be set up, which is somewhat foreign to the production and marketing of pulp and paper. Generally too, we find that such by-products are subject to competition from chemical and other manufacturers who are, by the nature of their operations in a much better competitive position. Therefore it is our belief that the recovery of materials that can be put back into the mill product offers the most favorable prospect of obtaining recoverable values. Incidentally, there is currently pending a bill before Congress (HR5091) which

would classify expenditures for waste treatment facilities as a deductible item in income tax returns and permit such expenditures to be amortized over a five year period. If this bill passes, it would, of course, make the installation of waste treatment facilities a much more attractive proposition financially at least for mills operating at a profit and therefore subject to corporation income tax.

Government Regulations in this Area

This presentation would be incomplete without some reference to stream pollution control in this region. Up to comparatively recent years, pollution control was centered in various state departments, generally the State Department of Health, under old statutes enacted many years ago. Within the past few years, practically all the states in this region have enacted legislature which places stream pollution control activities on a much more specific basis. Time does not permit reviewing the provisions of the regulations of each state. They are, however, all more or less similar.

The actual supervision of pollution matters is generally placed in the hands of Sanitary Engineers either of the Department of Public Health or of some Board. In Virginia for instance, this Board is known as the State Water Control Board. Generally the legislature defines pollution, provides for the establishment of water standards and for the issuance of licenses to discharge polluting materials. Chapter 399 of the laws of Virginia enacted in 1946, is an excellent example of equitable stream pollution control legislation.

Recently another and over-riding pollution control was added to the existing state and interstate pollution control measures. In June, 1948, the Congress of the U. S. enacted U. S. Public Law #845 which brings the control of pollution of interstate waters under some degree of Federal control. This act authorizes the U. S. Public Health Service under the Federal Security Agency to prepare programs for eliminating or reducing the pollution of interstate waters in cooperation with the various states, municipalities and industries involved. The Public Health Service has organized fourteen watershed divisions and set up an office in each division. Undoubtedly their engineers will wish to survey streams which will be of considerable interest to the pulp and paper industry.

Conclusion

In conclusion, I would like to offer a suggestion to any mill operator or superintendent whose mill is faced with a pollution program. The pulp and paper industry has established this national Council for Stream Improvement which has been adequately financed to study the industry's pollution problems. We have engineers available in each region to render free assistance to members. We will be very glad to be of assistance to you and our help should be valuable. We are not in a position to offer complete consulting service since our budget will not support this activity. Also, we do not feel justified in invading the field of the consulting engineer. We can, however, advise you in the light of our experience with many types of work in many different states and we will, upon request, suggest a consultant who can render complete engineering service.

How Humidification Cuts Paper Conversion Costs

By

TYLER G. HICKS

Consulting Engineer, Summit, New York

Paper storage, binding, folding, and various other manufacturing operations require controlled humidities to prevent loss of product weight and quality. Air conditioned manufacturing areas provide the best means for humidity control but the high initial cost occasionally rules them out. In other instances only a portion of the paper plant is air conditioned when first constructed and later expansion of manufacturing facilities requires use of unconditioned spaces. Poorer quality and less efficient production are almost always associated with use of such spaces. There have been many plants where product quality, production rate, and personnel efficiency have been increased by use of lower cost humidification methods utilizing steam or water sprays.

Spray Humidifiers

Two common types of spray humidifiers, together with their proper piping connections, are shown in Figure 3. Steam is usually considered a better humidifying medium than water because the moisture enters the room in the vaporized state. Heat from the room is not needed for moisture vaporization. When water is sprayed into a room, it must be vaporized before it can perform its humidifying function. Room air supplies the necessary heat with a resulting decrease in temperature. Paper converters have found that, in general, it is more economical to vaporize humidifying moisture in a boiler than it is to do it in the manufacturing area by using room heat.

Table I

Desirable Humidities and Temperatures for the Paper Industries

Process	Temp. °F	Rel. Humidity %
Binding	70	45
Folding	77	65
Printing		
(Litho)	69	45
(Relief and offset)	77	45
(General)	75	60–78
Storage	75–80	40–60

Water sprays are good in warm climates where room temperature reduction and humidification are both desirable. Spraying steam into a paper manufacturing or storage area raises air temperature 1 to 2°F. A water spray, in sufficient quantity, can reduce room temperature as much as 30°F. if desired. Therefore, humidifier selection is a function of paper plant location and desired temperature conditions.

Humidities

Table I lists desirable humidities and

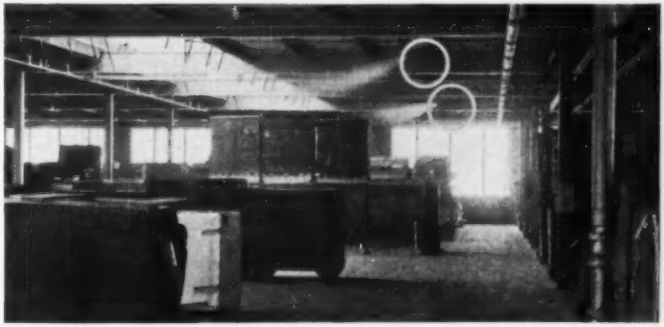


Figure 1: Steam spray humidifiers maintain a 5% moisture content in the paper stored in this room by keeping a relative humidity of 50 percent at 65° Fahrenheit.

Table II

Moisture Content of Saturated Air, Grains of water per cu. ft. of air

°F	Grains	°F	Grains	°F	Grains
—50	0.0283	25	1.558	100	19.95
—45	.0386	30	1.946	105	22.95
—40	.0525	35	2.376	110	26.34
—35	.0708	40	2.863	115	30.13
—30	.0945	45	3.436	120	34.38
—25	.1261	50	4.106	125	39.13
—20	.1662	55	4.889	130	44.41
—15	.2182	60	5.795	135	50.30
—10	.2847	65	6.845	140	56.81
— 5	.3692	70	8.055	145	64.04
0	.475	75	9.448	150	71.99
5	.609	80	11.04	155	80.77
10	.776	85	12.87	160	90.43
15	.984	90	14.94	165	101.0
20	1.242	95	17.28	170	112.6

dry bulb temperatures for various paper operations. The values listed are suitable for all ordinary paper manufacturing operations, though local conditions may require slight variations. This listing is especially useful when estimating humidifier capacity and cost for a given paper plant.

Humidifier capacity is a function of: (1) room relative humidity necessary, (2) dry bulb temperature in the room, (3) minimum outdoor temperature in the plant locality, (4) number of hourly air changes in the room, and (5) absorption by hygroscopic materials which pass through the manufacturing area.

Relative humidity and dry bulb temperature can be obtained from *Table I*. Weather records will supply the minimum outdoor temperature in the plant locality. This minimum value is used only as starting point in humidifier calculations because the lowest temperatures seldom prevail for more than a few hours. Hence, 10°F is added to the minimum outdoor temperature to obtain the *design outdoor temperature*.

Number of hourly air changes can usually be assumed as two but if the plant ventilating system supplies more changes the actual number should be used. An example of the latter would be ventilated dryers which use all outside air for drying. The air, exhausted from the dryer and discharged from the manufacturing space, must be replaced by outside air. This outside air has to be humidified as it passes through the room, otherwise proper conditions will not prevail for paper production.

All types of paper can absorb or release moisture during processing and storage. Since product quality is usually directly dependent on moisture content, controlled humidity will often cut rejects. The room humidifier must supply sufficient moisture to take care of any absorption by hygroscopic materials plus that required for air changes. In general, the two air changes given above are sufficient to care for a moderate amount of absorption. If a large amount is anticipated in the paper plant, the weight of water required should be added to the amount required for humidification.

Figure 2: Close up of steam-spray humidifier.

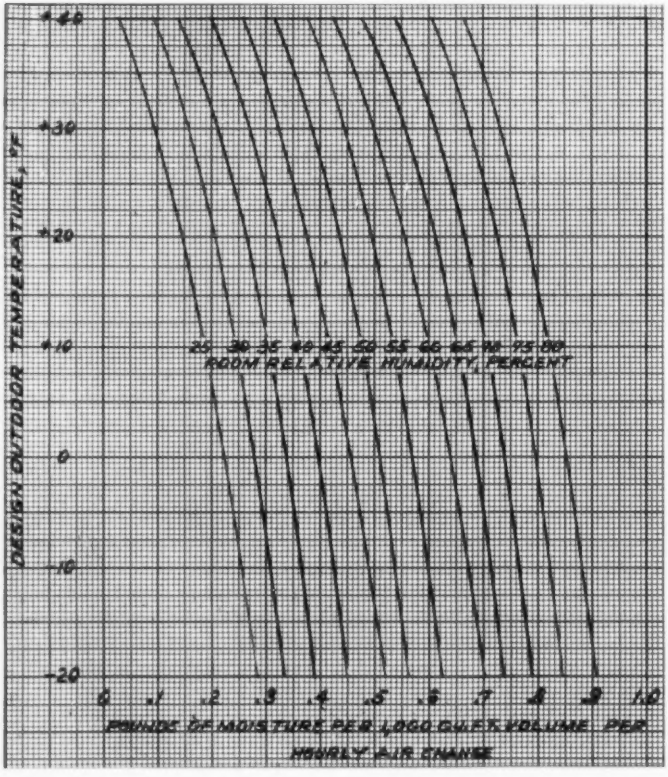

+40
+30
+20
+10
0
-10
-20
DESIGN OUTDOOR TEMPERATURE, °F
20 30 35 40 45 50 55 60 65 70 75 80
ROOM RELATIVE HUMIDITY, PERCENT
0 .1 .2 .3 .4 .5 .6 .7 .8 .9 1.0
POUNDS OF MOISTURE PER 1,000 CU.FT. VOLUME PER HOURLY AIR CHANGE

Figure 3: Moisture needed to maintain room humidity at various values when the minimum outdoor temperature is known. Use of the chart is explained in the text of this article.

Humidifier selection

Two typical selection problems for paper plants will be given. These problems will illustrate the use of tables and a chart which have been specially prepared to speed humidifier selection.

Problem 1: A New Jersey paper plant has a storage room of 50,000 cubic feet volume. Minimum outdoor temperature in plant locality is +5°F. How much moisture, steam or water, must be supplied to the room if a 70F dry bulb temperature and a 65% relative humidity are required? Moisture absorption by products in the room is estimated to be 50 lbs./hr. and plant ventilating system supplies 4 air changes per hour.

Solution: *Figure 3* is for paper plants with a 70°F indoor temperature and various relative humidities. To use, first find the "design outdoor temperature" as 5°F + 10°F = 15°F. Enter *Figure 3* at 15°F and run across horizontally to the 65% relative humidity curve. Then drop vertically to the bottom of the chart and read 0.63 lbs. of moisture per 1,000 cubic feet volume per hourly air change.

Since there are 4 air changes per hour and the room has a volume of 50,000 cubic feet, humidification moisture equals:

$$\frac{4(50{,}000)(0.63)}{1{,}000} \quad \text{or,}$$

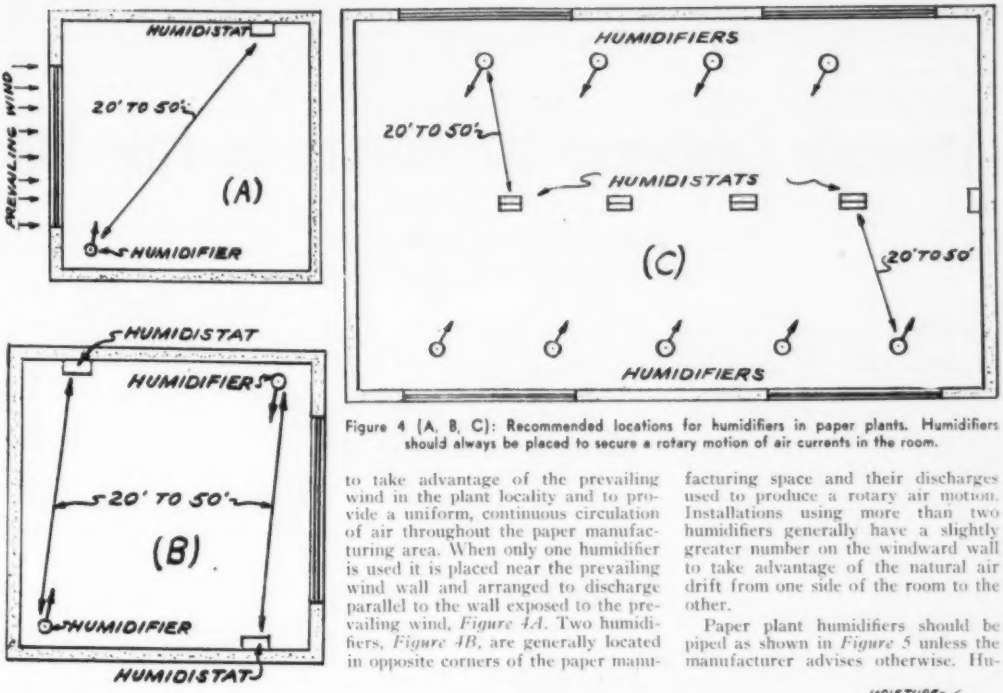


Figure 4 (A, B, C): Recommended locations for humidifiers in paper plants. Humidifiers should always be placed to secure a rotary motion of air currents in the room.

or 126 lbs./hr.

Hence, total moisture, steam or water, is 126 + 50 = 176 lbs./hr. A humidifier with a capacity equal to or greater than this value would be selected.

Problem 2: It is desired to maintain a 65°F dry bulb temperature and a 60% relative humidity in a binding area. How much moisture must be supplied if the room has a volume of 63,000 cubic feet, a minimum outdoor temperature of —15°F, and 2 air changes per hour?

Solution: *Figure 3* is suitable only for indoor temperatures of 70°F. For other indoor temperatures *Table II* must be used. At the *design outdoor temperature* of —15°F + 10°F — 5°F, saturated air contains 0.369 grains per cubic foot, from *Table II*. Saturated air at 65°F, i.e. at 100% relative humidity, contains 6.845 grains per cubic foot. At 60% relative humidity it has 0.60(6.845) = 4.107 grains per cubic foot. The difference, (4.107-0.369) = 3.738 grains per cubic foot must be added by the humidifier. Since there are 7,000 grains in a pound, humidification moisture = $\frac{2(63{,}000)(3.738)}{7{,}000}$ 67.2 lbs./hr., says 70 lbs./hr. A humidifier with a capacity of 70 or more lbs./hr. would keep the paper in good condition.

Humidification

Correct installation locations for one or more humidifiers are shown in *Figure 4*. Proper location is necessary to take advantage of the prevailing wind in the plant locality and to provide a uniform, continuous circulation of air throughout the paper manufacturing area. When only one humidifier is used it is placed near the prevailing wind wall and arranged to discharge parallel to the wall exposed to the prevailing wind, *Figure 4A*. Two humidifiers, *Figure 4B*, are generally located in opposite corners of the paper manufacturing space and their discharges used to produce a rotary air motion. Installations using more than two humidifiers generally have a slightly greater number on the windward wall to take advantage of the natural air drift from one side of the room to the other.

Paper plant humidifiers should be piped as shown in *Figure 5* unless the manufacturer advises otherwise. Hu-

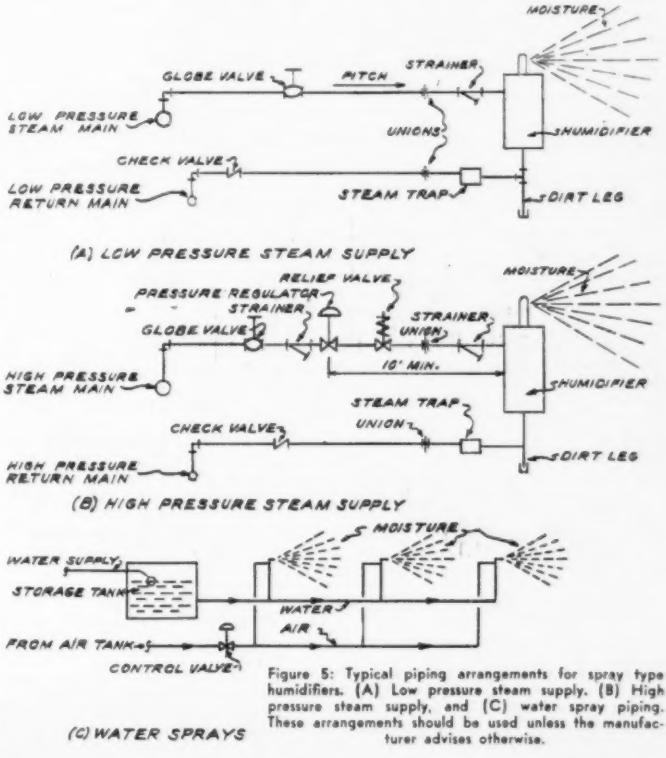


Figure 5: Typical piping arrangements for spray type humidifiers. (A) Low pressure steam supply. (B) High pressure steam supply, and (C) water spray piping. These arrangements should be used unless the manufacturer advises otherwise.

midistats should be located to one side of humidifying moisture stream, 20′ to 50′ away and are best mounted in the paper production area where they will control the humidity of the air important to the quality of the plant output.

Most paper plants require accurate control of air humidity. Spray humidifiers will give the needed control if properly selected and installed. Since the results of good control are shown in every paper product which leaves the plant, the time and effort spent in selection and installation is well worthwhile.

Automatic Continuous Weighing in the Pulp Mill

By

JOHN DENTON HOUSTON

Vice President, Sintering Machinery Corporation, New York, N. Y.

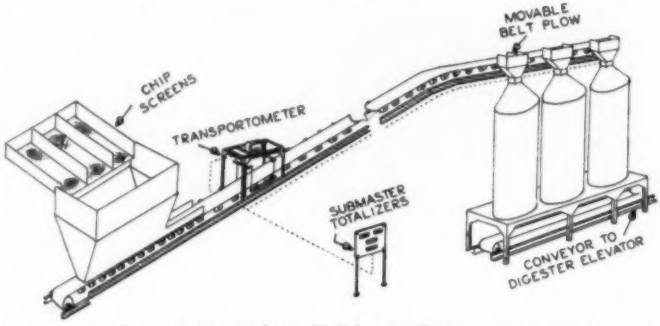
Present-day higher costs of materials and labor have shown the necessity of accurately and automatically checking raw materials through their many stages to the finished product.

The labor and inaccuracy of hand weighing on dormant types of scales are rapidly being supplanted by continuous weighing scales which automatically weigh, indicate, integrate and totalize the tonnage, without interruption of flow, as the materials are transported on belt conveyors into storage, out of storage, into process, etc., and provide accurate, machine-made bookkeeping records.

In mills using belt conveyors for the transporting of sulphur from unloading facilities to storage bins, a Transportometer will provide an automatic and accurate tonnage record of purchased material to provide a continuous inventory. The automatic continuous weight records of sulphur consumption, can be accurately obtained by the installation of a Transportometer on the belt conveyor, transporting sulphur from the storage bins to the melters. The Transportometer is a "unit type" automatic continuous weighing scale, requiring no changes to existing belt conveyors for its installation.

Pulp mills employing black liquor recovery systems will find in the Transportofeeder a dual purpose scale. This scale is a self-contained unit for automatically and continuously transporting salt cake from the storage bin to the mixing tank, indicating, integrating and totalizing the tonnage, as well as correcting salt cake density and particle size to maintain an optimum, preset rate of feed; the discharge of the Transportofeeder is provided with a by-pass for use with synthetic salt cake.

An automatic continuous weight record of the number of cords of wood taken from the storage yard to the chipping room can be accurately obtained by installing a Transportometer on the log chain, or drag conveyor used to transport the logs. Any number of Submaster Totalizers can be used to automatically record in pounds, tons or cords, the weight or volume of logs taken from any section of the yard, or to check against the chips produced from logs of different periods of exposure, areas of purchase,



Transportometer for wood chip weighing with Submaster Totalizers. The Transportometer is screened for 50 to 60 percent reduction.

different species of wood, etc.

A continuous, automatic weight record percentage of clean wood chips per cord of wood chipped, can be obtained by installing a Transportometer on the belt conveyor transporting chips from the screens to the digester storage bunker. This Transportometer, provided with several Submaster Totalizers will also provide accurate tonnage records of the several different kinds of wood chipped, total tonnage of chips charged to the digesters, and by accurate weighing, improve chip sampling if a cut-stream is used at the conveyor discharge pulley.

There have been many recent installations in which the wood chip storage bunker has been placed at ground level, the chips being conveyed to the digesters by flight or bucket elevators. The Transportoweigher has been designed as a complete, self-contained, transporting, weighing, indicating, integrating and tonnage totalizing unit for receiving the wood chips directly from the elevator. The Transportoweigher then discharges weighed chips directly to a distributing chute or shuttle conveyor, and automatically records the digested chip tonnage. Where the individual digester charge is required, a Transportotrol is preset for the required digester tonnage and when this weight of chips has been discharged, the Transportoweigher will sound an alarm or stop the preceding chip handling equipment.

An accurate and automatic accounting tonnage record of hogged fuel can be obtained by the installation of a Transportometer on the belt conveyor transporting hogged fuel from the saw mill to the boiler house, or fuel storage. To provide accurate records of the percentage of wood chip rejects, and proper crediting of pulp mill with reject refuse, a Transportometer should be installed on the belt conveyor transporting oversize from the chip screens back to the saw mill for reduction to hogged fuel.

Where duplicate records are required on the operating floor, in the laboratory, in the superintendent's office, etc., Transportographs providing a full day's operating chart record, Transportdicators showing the instantaneous tonnage rate, Submaster Totalizers resettable to zero, show actual tonnage for a short time check or a continuous duplication of the Master Totalizer reading are available for operation on 110 volt, two wire circuits.

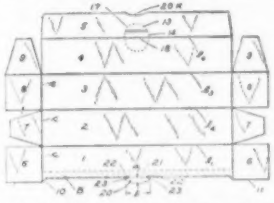
The completely mechanized weight integrator used in Transportometers, Transportoweighers and Transportofeeders is rugged, simple and easily understood by the average mechanic. Transmission of all rotary motions is directly by steel gears; free from the possibility of slippage of leather belt friction drives; true scale lever systems are employed and no transposition of weight into electrical or pneumatic impulses is necessary to its operation; the debasing errors of mercury dash-pots are completely eliminated through the use of a simple, pendulum type scale beam, sensitive to the slightest weight changes; all scales are assembled and shipped as complete units requiring fewer than a dozen bolts for their complete installation.

Patent Abstracts

● ***In addition to abstracts on the technology of pulp, paper and related industries, miscellaneous abstracts which may provide useful information are included.***

2,474,783—Carton. Fred C. Gluck, Minerva, Ohio, assignor to Minerva Wax Paper Company, Minerva, Ohio. Filed April 8, 1946—Issued June 28, 1949.

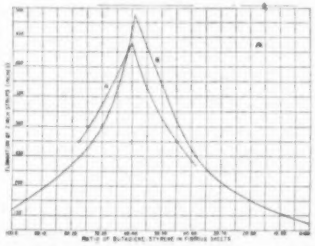
A carton for dispensing rolled sheet material formed from a single sheet comprising end, front, bottom, back and top cover walls with a flap hingedly secured to said top cover wall and



adapted to lie interiorly of said front wall when the carton is closed without engaging the bottom wall, said front wall having its top edge lower than the height of the end walls and lying between the upper and lower edges of said flap when the cover is closed, a cutter blade secured to said front wall adjacent its top edge and overlying said edge and terminating short of said end walls, a locking tab removably secured to the top edge, of said front wall behind said blade, said flap having a slot at substantially the level of said edge for receiving said tab, said slot being shorter than the maximum width of said tab but not substantially wider than the thickness of said tab.

2,474,801—Fibrous Sheets Formed From An Aqueous Suspension of a Mixture of Fibers and Butadiene-Styrene Copolymer. Allen F. Owen, Beaver Falls, N. Y., assignor to Latex Fiber Industries, Inc., Beaver Falls, N. Y. Filed September 15, 1945—Issued June 28, 1949.

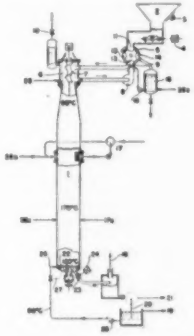
An article of manufacture comprising a sheet containing papermaking fibers and about 25 parts by weight of an emulsion polymerized copolymer of butadiene-1,3 and styrene per 100 parts by weight of papermaking fibers, said sheet being formed from an aqueous suspension of a mixture of papermaking fibers and dispersed particles of the copolymer of butadiene-1,3 and sty-



rene in which the ratio of butadiene to styrene, by weight, is within the range from 50:50 to 70:30, said copolymer being mixed with said fibers while said fibers are in aqueous suspension and prior to forming said fibers into a sheet.

2,474,862 — Process and Apparatus For Continuous Digestion of Fibrous Materials. Johan Christoffer Fredrik Carl Richter, Oslo, Norway, assignor to Aktiebolaget Kamyr, Karlstad, Sweden. Filed December 4, 1943—Issued July 5, 1949.

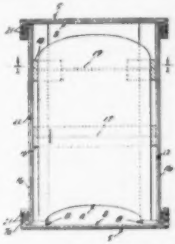
The process of continuous digestion of fibrous materials under pressure, which consists in continuously introducing the raw material into an impregnation zone in a vertical digester at the top thereof, said impregnation zone having a temperature substantially below digestion temperature, continuously introducing digester liquor into said impregnation zone in the digester at the top thereof to continuously maintain the digester completely filled with a mixture of raw material and digester liquor, supplying heat to said mixture in a digestion zone below said impregnation zone in said digester, passing said mixture of raw material and digester liquor as a continuous downward flow through the digester from the top to the bottom thereof, continuously discharging the digested product from the bottom of said digester, maintaining said mixture of material and digester liquor during such flow through the digester under a pressure higher than the vaporization pressure of the digester liquor at the maximum temperature prevailing in the digester, thereby preventing generation of vapour from said digester liquor, controlling such pressure by introducing into the digester in the vicinity of the bottom thereof and independently of the supply of raw material and digester liquor into the digester at the top thereof a compression liquid consisting of waste liquor having a lower temperature than the digestion temperature in the digester, such compression liquid producing a decrease in temperature at the bottom of the digester, the quantity of compression liquid introduced equalling the difference between the quantity discharged and the sum of the



quantities charged into the digester per unit of time, and controlling the rate of discharge from the digester in dependence upon the temperature at the bottom of the digester, thereby effecting regulation of the quantity of compression liquid introduced in the digester whereby a predetermined temperature is maintained at the bottom of the digester.

2,474,968—Shipping Package. Ralph L. Beach, Jr., Georgetown, S. C., assignor to International Paper Company, New York, N. Y. Filed November 16, 1946—Issued July 5, 1949.

A package of the class described formed from paperboard and comprising a cabinet mounting skid, a cabinet mounted on said skid, and a carton surrounding said skid and said cabinet and including side and end walls and top and bottom closures, the upper and lower edge portions of each of said side and end walls being reverse-folded outwardly to provide closure-locking flanges, each of said top and bottom closures consisting of a pair of generally rectangular sheets of paperboard disposed in superposed relation with their longer dimensions at right angles to each other and having end portions extending outwardly beyond the planes of the respectively associated side and end walls and folded into interlocking engagement with the said reverse folded edge portions of said side and end walls, means to secure all of said interlocking end portions in interlocking position, padding means detachably secured to said cabinet for maintain-

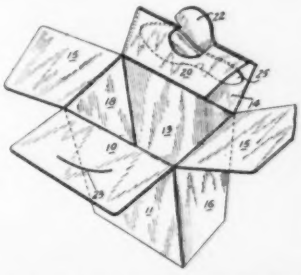


ing the side and end walls of said carton in spaced relation to the associated wall portions of said cabinet, and means removably positioned within said carton and engageable with said padding means in the areas of vertical corner edge portions of said cabinet for cushioning said cabinet against jolting and normally effective for maintaining said cabinet relatively immovable with respect to said carton.

2,475,286 — Method of Preparing Chlorine Dioxide. Willis S. Hutchinson, St. Paul, Minn., assignor to Mathieson Chemical Corporation. Filed July 12, 1944—Issued July 5, 1949.

A process for the production of chlorine dioxide in a state of dilution with an inert diluent gas which comprises reacting gaseous nitrogen peroxide, diluted with said diluent gas to a concentration not greater than about 10 mole percent, with a chlorate of an alkali metal.

2,475,294—Carton. Bennie A. Rafoth, Appleton, Wis., assignor to Marathon Corporation, Rothschild, Wis. Filed September 20, 1946 — Issued July 5, 1949.

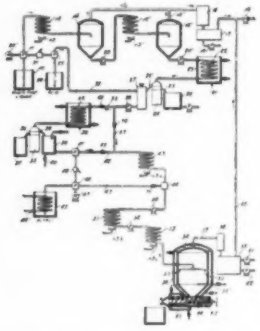


A carton comprising a receptacle portion and hinged closure panels, said receptacle portion

comprising front, rear, and end walls for retaining a product to be consumed, a closure panel hinged to the rear wall of said receptacle portion on a hinge line, an extension panel hinged to said closure panel along a score line positioned substantially medially thereof and substantially parallel to said hinge line, said score line being interrupted in an intermediate portion thereof by a curvilinear hook-shaped cut score extending into said extension panel to provide a locking tongue portion for said closure panel, said extension panel being adhered to the inner face of said first closure panel along a longitudinal edge and one intersecting edge to provide a pocket portion for receiving and retaining an implement for dispensing food packaged within said tray portion, and a second closure panel hingedly connected to said front panel, said second closure panel being provided with a slit for receiving said locking tongue portion in locking engagement.

2,475,361—Process of Treating Waste Pulp Liquors. Benjamin H. Thurman, New York, N. Y., assignor to Benjamin Clayton, Refining, Unincorporated. Filed March 6, 1946—Issued July 5, 1949.

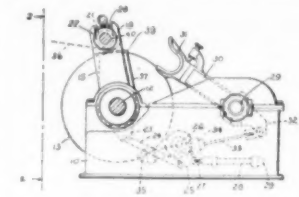
The process of separating material containing saponifiable acids combined with alkali from waste pulp liquor and recovering a purified soap



therefrom, which comprises, withdrawing a stream of said liquor from a source of supply, heating said stream during flow thereof to a temperature sufficient to cause a predetermined amount of water to be in vapor form after discharge of said stream into a vapor separating chamber, discharging said stream into said vapor separating chamber, withdrawing sufficient water in the form of vapor from said chamber to cause said material in said liquor to become insoluble therein and produce a centrifugally separable mixture of said material and concentrated liquor, continuously withdrawing a stream of said centrifugally separable mixture from said chamber, delivering said stream to a continuous centrifugal separator, withdrawing a stream of said material from said centrifugal separator, mixing said stream of said material with a proportioned stream of mineral acid to produce a resultant mixture containing free saponifiable acids, delivering a stream of said resultant mixture to a centrifugal separator, continuously centrifugally separating said free saponifiable acids from said resultant mixture in said separator, mixing a proportioned stream of said free saponifiable acids with a proportioned stream of a saponifying agent to produce a mixture containing soap, delivering a heated stream of the last-mentioned mixture to a vapor separating zone, and continuously removing vapors therefrom to produce a purified soap from said free saponifiable acids.

2,475,480—Paper Winding Machine. Everett W. Clem, Shrewsbury, and John P. Munton, Worcester, Mass., assignors to Rice Barton Corporation, Worcester, Mass.—Filed November 15, 1946—Issued July 5, 1949.

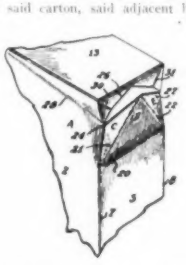
A paper winding machine comprising, a driving drum, means to rotate said driving drum, a



pair of quadrant arms each pivotally supported adjacent a respective one of the end portions of said driving drum, a paper winding roll carried by said quadrant arms and normally disposed in surface contact with said driving drum so as to be driven thereby, means disposed adjacent each end portion of said driving drum for initially supporting, in cooperation with said quadrant arms, said winding roll directly above and out of contact with said driving drums, means extending coaxially of and from one end of said winding roll, an auxiliary driving device normally disposed in a position remote from said winding roll, means for shifting said auxiliary driving device into and out of engagement with said last mentioned means for imparting rotation to said winding roll while the same is disposed above and out of contact with said driving drum, and means for shifting said quadrant arms so as to bring said rotating winding roll into surface engagement with said driving drum.

2,475,677 — Folding Carton Having Reclosable Pouring Spout. William A. Ringler, Wayne, Pa., assignor to The Gardner Board and Carton Co. Filed December 7, 1946 — Issued July 12, 1949.

In a tubular carton having a plurality of enclosing body walls and end closure means, a pouring spout construction comprising lines for severance formed in a body wall intermediate the ends thereof and forming a peak directed toward an end of the wall, the wall having score lines extending divergently away from said peak and defining three substantially triangular panels of a pouring spout, whereby pressure on portions of the adjacent body walls will cause said pouring spout to extend outwardly providing an access opening to said carton, said adjacent body walls



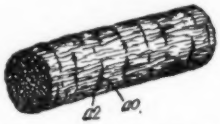
being in imperforate condition, and having slantwise score lines therein connecting the ends of said lines for severance with the far corners of said walls to provide lines along which portions of said walls may flex upon the application of pressure, said first mentioned wall having a score line transversely located and connecting the ends of said score lines defining the panels of the pouring spout, and the end closure toward which said peak is directed being displaced toward said peak so as to provide an abutment behind which portions of the pouring spout may be engaged when said spout is collapsed.

2,475,678 — Higher Cellulose Esters. Robert D. Rowley, Narrows, Va., assignor to Celanese Corporation of America. Filed September 11, 1945—Issued July 12, 1949.

Process for the production of cellulose triacetate from hydrolyzed cellulose acetate, which consists of dissolving a hydrolyzed cellulose acetate of an acetyl value of about 54.4%, calculated as acetic acid in glacial acetic acid, adding sufficient acetic anhydride to the solution obtained to form the desired tri-acetate, heating the reaction mixture produced to a temperature of 60 to 100° C., and maintaining said mixture at the esterifying temperature for 48 hours until the cellulose acetate is fully esterfied.

2,475,766—Artificial Fuel Made From Paper. Ralph O. Williams, Brooklyn, and Vladimir Bredlik, New York, N. Y., assignors to Williams-Bauer Corporation, New York, N. Y. Filed April 30, 1946—Issued July 12, 1949.

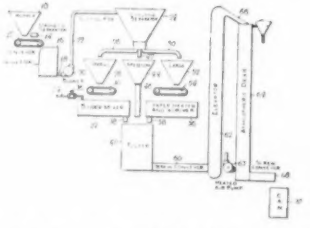
As a new article of manufacture, an artificial fuel comprising a mixture of modulated pa-



per and binder molded into a form retaining state having a density between 1 and 1.25, said modulated paper consisting of a mixture of approximately fifteen percent "non-absorbent" paper, seventy percent "absorbent" paper and fifteen percent semi-absorbent paper ground to various degrees of fineness whereby all of the modules will pass through a screen of one-half inch mesh with approximately one-half of the modules being incapable of passing through a screen of one-quarter inch mesh.

2,475,769—Method of Making Artificial Fuel Logs From Paper. Ralph O. Williams, Brooklyn, and Vladimir Bredlik, New York, N. Y., assignors to Williams-Bauer Corporation, New York, N. Y. Filed November 10, 1947—Issued July 12, 1949.

The method of converting paper into artificial fuel in the form of logs or briquets com-



prising the steps of modulating the waste paper to a relatively fine degree, separating the ultra fine particles and the freed sizing from the coarse modulated paper particles, mixing the ultra fine particles and freed sizing with a binder to form a viscous paste, mixing the paste and the coarse particles of the shredded paper together until the latter is coated intimately with the binder, compressing the resultant admixture into a form-retaining mass, drying and applying a moisture-resisting protective coating to the outer surface of said form-retaining mass.

FINANCIAL RECORD •

	Per Share Earnings			
	Calendar Year 1948	12 Mo. to Approx. 9/30/49	Indic. Annual Divid. Rate	Nov. 29 Approx. Market Price
PREFERRED STOCKS				
Armstrong Cork Co. $3.75 Cum.	$46.33*	$38.47*a	$3.75	$99⅜
Armstrong Cork Co. $4.00 Cum. Conv.	46.33*	38.47*a	4.00	112
Celotex Corp. 5% Cum.	26.42c	10.33p	1.00	16⅝
Champion Paper & Fibre $4.50 Cum.	99.97f	37.50j	4.50	97½
Container Corp. of Amer. 4% Cum.	105.41	90.43	4.00	102¼
Crown Zellerbach $4.20 Cum.	63.92i	61.00p	4.20	102½
Crown Zellerbach $4.00 Cum. Conv. 2nd	60.56i*	57.90p*	4.00	98⅜
Dixie Cup Co. $2.50 Cum. Conv. Cl. A	10.10	10.44	2.50	52⅛
Flintkote Co. $4 Cum.	83.25	61.44	4.00	103½
Robert Gair Co., Inc. 6% Cum.	17.08	12.88	1.20	17¾
International Paper Co. $4 Cum.	263.00	245.41	4.00	103
Johns-Manville $3.50 Cum.	209.89	204.89	3.50	117½
Kimberly Clark Corp. 4½% Cum.	80.74	70.92	4.50	103
Kimberly Clark Corp. 4% Cum. Conv. 2nd	41.59*	42.20*	4.00	102⅜
MacAndrews & Forbes 6% Cum.	62.23	64.10	6.00	138½
Mead Corp. 4¼% Cum.	73.46	49.00k	4.25	88
Mead Corp. 4% Cum. Conv. 2nd	29.91*	19.93k*	2.00	31¾
Paraffine Cos. Inc. 4% Cum. Conv.	156.11	74.77	4.00	102½
Rayonier Inc. $2 Cum.	16.43	10.76	2.00	31⅝
St. Regis Paper Co. 4.40% 1st A	79.90	34.21	4.40	86
Scott Paper Co. $3.40 Cum.	59.06	52.36	3.40	97⅜
U. S. Gypsum Co. 7% Cum.	314.45	281.64	7.00	182⅞
United Wallpaper Inc. 4% Cum. Conv.	(d)0.79	15.43	2.00	24½
West Virginia Pulp & Paper 4½% Cum.	79.45c	69.93p	4.50	108
COMMON STOCKS				
APW Products Co.	$0.73	(d)$1.01	(m)	2⅝
American Writing Paper Corp.	(d)0.15	0.05	$0.25	6¼
Armstrong Cork Co.	7.54	6.13a	3.00	49⅞
Celotex Corp.	7.21c	2.75p	1.00	18¾
Certain-Teed Prods. Corp.	4.02	3.09	1.00	13⅞
Champion Paper & Fibre	8.70f	3.20j	2.00	28⅝
Congoleum Nairn Co.	5.78	4.92a	2.00	28⅜
Container Corp. of America	10.12	8.50	4.50	39⅝
Crown Zellerbach	7.16i	6.68p	2.00	28⅜
Dixie Cup Co.	6.70	7.00	1.50	38
Eastern Corp.	4.76	d0.07	(h)	16⅜
Flintkote Co.	5.86	4.14	2.50	28⅝
Robert Gair Co., Inc.	2.67	1.96	0.70	6¾
Great Northern Paper Co.	4.63	5.21	2.80	39½
International Paper Co.	16.73	15.59	5.00	64⅝
Johns-Manville Corp.	5.22	5.07	2.50	42⅝
Kimberly Clark Corp.	5.02	4.32	1.65	24½
MacAndrews & Forbes Co.	3.68	3.79	2.50	36⅝
Marathon Corp.	4.11c	3.42p	1.40	22⅞
Mead Corp.	6.36	3.98k	1.00	14½
National Container Corp.	2.28	1.04	0.40	6¾
Paraffine Cos. Inc.	2.45	1.15	1.20	18¾
Rayonier, Inc.	9.09	5.52	2.00	23⅝
Ruberoid Co.	11.80	9.37	3.25	59½
St. Regis Paper Co.	2.71	1.02	0.60	7⅛
Scott Paper Co.	4.15	5.38	3.00	65⅜
Sutherland Paper Co.	6.02	5.12	2.50	37½
Union Bag & Paper Corp.	9.17	5.36	3.00	25⅞
United Board & Carton	2.04b	(d)1.72g	(e)	7⅜
U. S. Gypsum Co.	15.04	13.43	9.00	102⅜
United Wallpaper	(d)0.10	0.42	(n)	3⅛
West Virginia Pulp & Paper	11.33c	9.70p	3.00	48⅛

(a) 12 months to approximately 6/30/49
(b) Year ended 11/23/48
(c) Year ended 10/31/48
(d) Deficit
(e) Omitted dividend 2/4/49
(f) 11 months to 3/31/49
(g) 12 months to approximately 8/20/49
(h) Directors took no action on August, 1949 dividend—last payment 5/2/49
(i) 12 months to approximately 1/30/49
(j) 6 months to 9/30/49
(k) 12 months to approximately 10/2/49
(m) Directors took no action on July, 1949, dividend—last payment 1/10/49
(n) Last payment 25c, 9/16/47
(p) 12 months to approximately 7/31/49
(*) Earnings per combined preferred shares.

Dividends Declared

Hinde & Dauch Paper Co., has declared an extra of 30 cents on its common stock, payable December 24 to holders of record December 2, and the usual quarterly dividend of 30 cents on the common, payable January 3 to holders of record December 2.

Armstrong Cork Co., has declared a final 1949 dividend of $1.30 per share on its common stock, payable December 20 to holders of record December 2.

National Gypsum Co. has declared a regular dividend of 25 cents a share and an extra of 25 cents a share.

Robert Gair Co., Inc., has declared a quarterly dividend of ten cents per share and a year-end dividend of 30 cents per share on its common stock, payable December 20 to holders of record December 1. As previously announced, the dividend on its preferred stock for the full year has been declared, and the dividend of 30 cents a share in respect of the fourth quarter of 1949 will be payable on the same date.

Morris Paper Mills has declared an extra of 35 cents and the usual quarterly of 35 cents on its common stock, payable December 10 to holders of record November 28.

Consolidated Paper Corp., Ltd., has declared an extra of 75 cents and regular semiannual dividend of 50 cents on its common stock, both payable January 17 to holders of record December 5.

Fort Wayne Corrugated Paper Co. has declared a year-end dividend of 75 cents a share on its common stock, payable December 15 to holders of record November 30.

Capital Structure Revised

OTTAWA—Pulp & Paper Mill Accessories, Ltd., has altered its capitalization so that it now consists of 257 six percent cumulative preferred shares and 1,243 common shares, all of the par value of $100 each.

Building

- **FOR THE PAPER INDUSTRY**
- We design, build, and equip paper and pulp mills ... steam generating plants ... and facilities for eliminating stream pollution.
- Under one contract and one responsibility, we deliver jobs complete, ready for operation.
- We also furnish engineering reports and surveys. Current cost data available at all offices.

The H.K. Ferguson Co.
INDUSTRIAL ENGINEERS AND BUILDERS

THE FERGUSON BUILDING • CLEVELAND, OHIO
OFFICES IN NEW YORK, HOUSTON, CHICAGO, CINCINNATI AND LOS ANGELES

PRICES . . . . . .

The prices below reflect general market quotations at the mill level on the standard grades in which the normal volume of business is being done. Does not include occasional spot offerings.

NEW YORK

Delivered Ports

Standard News, per ton—

Rolls, contract	$100.00/	—
Sheets	115.00/	—

F.o.b. Mills, Carload freight allowed, dock N. Y.

Kraft— per cwt., 40# base wgt.

Standard Wrapping Rolls	$6.50/	—
No. 1 Wrapping Rolls	7.25/	—
Standard Bag	6.00/	—

Tissues— per ream 24x36 (480) 10 lbs. 2500 lbs. or more

Wh. No. 1 Frd.	$155.00/	—
Wh. No. 1 M. G.	150.00/	—
Wh. No. 1½	140.00/	—
Wh. No. 2	120.00/	—
Kraft Anti-Tar	1.37½/	—
Shrd. Wh. No. 1 per lb.	.11½/	—

Toilet— per case of 100 rolls—1 M sheets.

Unbleached 4½x4½	$5.75/	—
Bleached 4½x4½	6.95/	—
Bleached 4½x5	8.80/	—
Per Case of 50 rolls—2000 sheets		
Unbleached 4½x4½	$5.75/	—
Bleached 4½x4½	6.80/	—
Per Case of 100 rolls—1000 sheets		
Facial, 4½ x 5, 2 ply	$8.95/$9.45	

Paper Towels—per case of 3750.

Wh. Jr. M'tif'd 9¼x9½	$5.25
Br. Sr. M'tif'd 10x12	3.60
Br. Jr. M'tif'd 9½x9¼	3.10
Br. Jr. Sgl. fold 10x10¼	3.15
Bldd. 7½ x 11, 24/25 rolls	$3.95/$6.25

Manila, per cwt.

No. 1 Jute Tag 40 lb., sheets*	$15.05/$17.50
Reg. Jute M.F. Manila, sheets*	13.50/ 15.30
Wrapping Manila	8.75/ 10.50
Printing Manila	10.00/ 11.00

* Less usual allowance for rolls.

Boards, per ton—

Filled News	$77.50/ —
Plain Chip	75.00/ —
Bldd. Mla. L-d. Chip*	97.50/ —
White Pat. coated*	115.00/ —
Kraft Liners 42 lb.	100.00/
Kraft Corr. .009	105.00/
Binders Boards	110.00/116.00

* Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

WORLD WOOD PULP MARKETS

Fourth Quarter Contract Prices, Per Short Air-Dry Ton

	Delivered, with varying freight allowances		On dock Atlantic Ports Full freight allowance		
	U. S.	Canadian	Swedish	Finnish	Norwegian
Groundwood	$65.00/ —	$65.00/ —			
Soda, Bleached	113.00/ —	113.00/ —		Competitive	
Sulphate, Bleached	118.00/126.00	126.00/ —	125.00/128.00		
Sulphate, Unbl'd North'n		82.50/105.00	82.50/ 85.00	with	
Sulphate, Unbl'd South'n	80.00/ 82.50				
Sulphite Bldd. (S'ftw'd)	118.00/ —	118.00/ —	118.00/ —	Domestic	Competitive
Sulphite, Bldd. (H'dw'd)	113.00/ —				
Sulphite, Unbleached	100.00/ —	100.00/ —	100.00/ —	Grades	
Sulphite, Unbl'd (Glassine)	105.00/ —	105.00/ —	104.00/105.00		

WASTE PAPER MARKET

Prices to Mills*, (Per Ton) F.o.b. Cars Shipping Point

	New York	Philadelphia	Boston	Chicago
	Nov. 17	Nov. 1	Nov. 19	Nov. 1
No. 1 Mixed Paper	$9.00/$10.00	$7.00/ $9.00	$9.00/ —	$10.00/ —
Boxboard Cuts	9.00/ 10.00	6.00/ 7.00	— / 5.00	13.00/ —
Mill Wrappers	11.00/ 12.00	9.00/ 11.00	— / 9.00	12.00/ —
No. 1 News	12.00/ 13.00	9.00/ 10.00	11.00/ 12.50	16.00/ —
Over-issue News	14.00/ 15.00	12.00/ 14.00	8.00/ 10.50	19.00/ —
Corrugated Containers	15.00/ 17.00	15.00/ 17.00	14.50/ 15.50	20.00/ —
New Corrugated Cuts	18.00/ 20.00	20.00/ —	16.00/ —	23.00/ —
Double Kraft Ld. Corr. Cuts	34.00/ 35.00	30.00/ 35.00	25.00/ —	35.00/ —
Used Kraft Bags	28.00/ 30.00	20.00/ 22.00	25.00/ 30.00	20.00/ —
No. 1 Brown Kraft Paper	25.00/ 30.00	25.00/ 30.00	30.00/ 35.00	20.00/ —
Super Resorted Br. Kraft	30.00/ 35.00	35.00/ —	40.00/ —	35.00/ —
New Br. Kraft Env. Cuts	65.00/ 70.00	60.00/ 65.00	60.00/ 65.00	55.00/ —
New Br. Kraft Cuts	40.00/ 45.00	50.00/ —	45.00/ —	50.00/ —
No. 1 Gdwd. Shvs.	20.00/ 25.00	15.00/ 20.00	25.00/ —	26.00/ —
White Newsblanks	55.00/ 60.00	40.00/ 45.00	50.00/ 55.00	35.00/ —
No. 1 Flyleaf Shvs.	30.00/ 35.00	25.00/ 30.00	35.00/ 45.00	35.00/ —
No. 1 Soft Wht. Shvs.	80.00/ 85.00	60.00/ 65.00	70.00/ 80.00	55.00/ —
Super Soft Wht. Shvs.	85.00/ 90.00	70.00/ 75.00	80.00/ 90.00	60.00/ —
Hd. Wht. Shvs.	90.00/ 95.00	80.00/ 85.00	80.00/ 90.00	80.00/ —
Hd. Wht. Env. Cuts.	105.00/115.00	90.00/ 95.00	90.00/105.00	90.00/ —
New Manila Env. Cuts.	65.00/ 70.00	60.00/ 65.00	60.00/ 70.00	55.00/ —
Col. Tab Cards	30.00/ 35.00	20.00/ 25.00	35.00/ —	40.00/ —
Manila Tab Cards	65.00/ 70.00	65.00/ 70.00	75.00/ 80.00	65.00/ —
No. 1 Mixed Ledger	30.00/ 35.00	27.50/ 32.50	37.50/ —	40.00/ —
White Ledger	45.00/ 55.00	40.00/ 45.00	50.00/ 60.00	50.00/ —
Mixed Books & Mags.	10.00/ 12.00	9.00/ 10.00	12.00/ —	12.00/ —
No. 1 Rep'd Hvy. Books & Mags.	20.00/ 25.00	20.00/ —	22.00/ 23.00	23.00/ —

* Includes brokers' fee.

The following prices are representative distributors' resale prices:

Rag Content Bonds and Ledgers—
White, 20 lb.

Bonds

	4 Ctns. per cwt.
100% Rag Ex. No. 1	$51.40/$53.90
100% Rag	44.55/ 46.15
75% Rag	33.90/ 35.40
50% Rag	28.10/ 29.55
25% Rag	24.85/ 26.80

Ledgers

	4 Ctns. per cwt.
100% Rag Ex. No. 1	$52.65/$54.55
100% Rag	45.65/ 46.40
75% Rag	35.15/ 36.10
50% Rag	29.40/ 30.05
25% Rag	26.15/ 26.80

Sulphite Bonds and Ledgers
White, 20 lb.

Bonds

	4 Ctns. per cwt.
Watermarked	$16.55/$17.50
Plain	15.60/ 15.95

Ledgers

	4 Ctns. per cwt.
Watermarked	$18.05/$18.80

White Book

Conversion Coated	Case per cwt.
No. 1	$19.75/$20.90
No. 2	19.25/ 19.65
No. 3	17.75/ 18.90
Machine Coated	
No. 1	16.40/ 16.65
No. 2	14.40/ 15.15
Uncoated	
No. 1 Antique (Watermarked)	16.40/ 17.90
Offset	15.15/ 16.65
A Grade E. F.	15.40/ —
A Grade S. C.	15.90/ 16.15
B Grade E. F.	14.90/ 15.15
B Grade S. C.	15.40/ 15.65

Twines
All Prices Nominal, F.o.b. Mill

(Soft Fiber)	
Coarse Polished—India	.35½/ .36½
Fine Polished India	.41½/ .45
Unpolished—Paper Makers	.32¾/ .34½
Tube Rope	.33¾/ .35½
Wrapping	.36 / .38¼
Cotton	.58 / .60
Polished Cotton	.55 / —
(Hard Fiber)	
Mex. Sisal	.21 / .27
(American Hemp)	
Polished Hemp	.45 / .48
Unpolished	.35 / .37½

Rag Market

New Domestic Cotton Cuttings
(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.	
White Shirt	$10.00/	$10.50
Unbleached Muslin	10.00/	10.50
Light Silesias	7.00/	7.50
White Back Blue Overalls	5.50/	6.00
Blue Overalls	4.50/	5.00
Fancy Shirt	4.50/	5.00
Percales	5.50/	6.00
Light Prints	5.50/	6.00
No. 1 Washables	2.75/	3.00
Bleachable Khaki	4.75/	5.00
Unbleachable Khaki	4.00/	4.50
Cottonades	4.25/	4.75
Lt. Flannelettes	6.75/	7.25
Men's Corduroy	3.50/	4.00
Women's Corduroy	3.00/	3.50

Old Domestic Cotton Rags
(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.	
No. 1 Whites, Repacked	$4.25/	$4.75
No. 1 Whites, Miscellaneous	3.50/	4.00
No. 2 Whites, Repacked	2.75/	3.00

No. 2 Whites, Miscellaneous	2.00/	2.25
Cotton Pants & Overalls	2.50/	2.75
Thirds and Blues, Repacked	2.00/	2.25
No. 1 Roofing Rags	1.50/	1.55
No. 2 Roofing Rags	1.40/	1.45
No. 3 Jute Baggings	1.25/	1.30
No. 4 Brussels & hrd. Bck'd crpts.	**.90/**	**1.00**
Roofing Bagging	**.80/**	**.95**

New Foreign Cotton Cuttings

(Prices to Mills, F.o.b. Dock, N. Y.)

	Per 100 lbs.
New Dark Cuttings	prices are nominal
New Mixed Cuttings	
Light Silesias	
Light Flannelettes	
New White Cuttings	
New Unbleached Cuttings	
Fancy Shirt Cuttings	
Light Prints	
Bleachable Khaki, No. 1	
Unbl. Khaki, No. 1	

Old Foreign Rags

(Prices to Mills, F.o.b. Dock, N. Y.)

	Per 100 lb.
No. 1 White Cottons	prices are nominal
No. 2 White Cottons	
No. 3 White Cottons	
No. 4 White Cottons	
Extra Light Prints	
Old Light Prints	
Med. Light Prints	
Dutch Blue Cottons	
Checks and Blues	
Linsey Garments	2.10/2.40
Dark Cottons, European	1.85/2.10
Dark Cottons, Egyptian	
Old Shopperies	
New Shopperies	

Bagging

(Prices to Dealers, f.o.b. N. Y.)

	Per 100 lbs.	
Foreign Gunny	$5.00/	5.50
Domestic Gunny, No. 1	6.00/	6.50
Heavy Wool Tares	6.00/	6.50
No. 1 Scrap Bagging	4.00/	4.50
Foreign Manila Rope	5.00/	5.25
Domestic Manila Rope	5.00/	5.25
Jute Strings	3.50/	3.75
No. 1 Sisal Strings	3.50/	4.00
Mixed Strings	1.15/	1.30

PHILADELPHIA

New Domestic Cotton Cuttings

(Prices to Dealers, F.o.b. East'n Ship. Pt.)

	Per 100 lbs.	
White Shirt	$10.00/$10.50	
Fancy Shirts	4.50/	5.00
Light Silesias	6.50/	7.00
Unbleached Muslin	9.75/	10.25
Light Prints	5.25/	5.75
Washable No. 1	2.50/	3.00
Blue Overall	5.75/	6.25
Percales	5.50/	6.00
Bleachable Khaki	4.50/	5.00
Unbleachable Khaki	3.25/	3.75
Men's Corduroy	3.75/	4.25
Ladies' Corduroy	3.25/	3.75
Cottonades	4.00/	4.50

Old Domestic Cotton Rags

(Prices to Dealers, F.o.b. East'n Ship. Pt.)

	Per 100 lbs.	
Mixed White	$2.75/	$3.50
Thirds and Blues Repacked	2.50/	2.75
Cotton Pants & Overalls	2.40/	2.75
No. 1 Roofing Stock	1.20/	1.50
No. 2 Roofing Stock	1.10/	1.40
Roofing Bagging	1.00/	1.10

Bagging

(Prices to Dealers, F.o.b. East'n Ship. Pt.)

	Per 100 lbs.	
Old Manila Rope	$5.00/	$5.25
Foreign Gunny No. 1	6.75/	7.00
Domestic Gunny, No. 1	6.75/	7.00
Sisal Strings No. 1	3.00/	3.50
No. 1 Scrap	4.00/	4.50
No. 1 Jute Rope	5.50/	6.00

BOSTON

Bagging

(Prices to Dealers, F.o.b. Boston)

	Per 100 lbs.	
Foreign Gunny	$5.25	/$6.25
Domestic Gunny	5.25	/ 6.25
Domestic No. 1 Old Rope	5.00	/ 5.25
Foreign No. 1 Old Rope	5.00	/ 5.25
Mixed Strings	1.35	/ —
Transmission Rope—Domestic	3.00	/ 3.50
Jute Carpet Threads	—	/ 2.00
Bleachery Burlap	—	/ 9.00
Scrap Burlap—		
Foreign	4.25	/ 4.75
Domestic	4.50	/ 5.00
South America	5.00	/ 5.50
Austr. Wool Pouches	6.50	/ 7.00
New Zealand Wool Pouches	—	/ 4.00
New Burlap Cuttings	6.00	/ 7.00
Heavy Baling Bagging	7.50	/ 8.00
Paper Mill Bagging	—	/ 3.50

Domestic Rags (new)

(Prices to Dealers, F.o.b. Boston)

	Per 100 lbs.	
New Light Prints	5.75	/ 6.00
Fancy Percales	6.25	/ 6.50
White No. 1 Shirt	10.00	/10.75
Light Flannelettes	—	/ 7.00
Canton Flannels, Bleached	—	/ 9.00
Underwear Cutters, Bleached	10.75	/11.25
Underwear Cutters, Unbleached	10.00	/10.25
Blue Overalls	6.00	/ 6.50
Soft Unbleached	9.75	/10.50
Blue Cheviots	6.00	/ 6.50
Fancy Shirt	4.00	/ 4.50
Washable	3.00	/ 3.25
Khaki Cuttings	5.00	/ 5.25
Men's Corduroy	4.50	/ 5.00
Khaki Canvas	—	/ 5.50
B. V. D. Cuttings	10.00	/10.25

Domestic Rags (old)

(Prices to Dealers, F.o.b. Boston)

	Per 100 lbs.	
No. 1 Whites, Repacked	$4.00	/$4.50
No. 1 Whites, Miscellaneous	2.50	/ 3.00
Twos and Blues, Repacked	2.50	/ 2.75
Cotton Pants & Overalls	2.50	/ 2.75
No. 1 Roofing Stock	1.75	/ 1.80
No. 2 Roofing Stock	1.50	/ 1.55
Roofing Bagging	1.30	/ 1.45

MATERIALS

Blanc Fixe

Heavy demand. Prices firm. Supply adequate. Currently quoted at $85.00 in bags, car lots, at works, 6 cents per pound, l.c.l., deld. By-product supply somewhat restricted. Quoted at $77.50 per ton, car lots, at works, 6 cents per pound, l.c.l., deld.

Bleaching Powder

Demand improved. Prices steady. Prices range from $4.50 to $5.00 per 100 pound drums, l.c.l., works.

Casein

Argentine flush season underway. Production good. Demand fair; prices holding. U. S. supply limited. Current prices on processed acid precipated grades 22½ to 23 cents, imported grades 18½ to 19¼ cents, ex dock, N. Y. car lots.

Caustic Soda

Demand heavier. Stocks adequate for prompt shipment. Contract prices for 1950 unchanged. Solid caustic is reported at $3.05 per cwt. flaked and ground is quoted at $3.45 per cwt., in 400 pound drums, $3.95 per cwt. in 100 pound drums —car lots, at works; liquid 50 percent in tank cars at $2.40 per cwt.; liquid 73 percent in tank cars at $2.50 per cwt., at works.

China Clay

Demand strong. Supply of domestic and imported ample. Domestic airfloated filler quoted at $10 per ton, water-washed $11.00, car lots, f.o.b. mines. Coating clay is $16 to $30. Imported clays repriced to $15.20 and $28.35 short tons, export warehouse.

Chlorine

Demand strong. Supply condition tight. Prices firm at present levels for 1950 contracts. Currently quoted at $2.40 per cwt. in single unit tank cars; at $2.70 to $3.90 per cwt. in multi-tank cars, f.o.b., works.

Rosin

Prices fluctuate with daily sale. Stocks fairly heavy. Export sales cut by devaluation. Expect early decision on loan. Gum rosin in drums per 100 pounds net in car lots, f.o.b. Savannah, B, $5.75; G, H, I, K, $6.54; wood rosin, per 100 lbs., car lots, f.o.b. Savannah; B, $4.25; FF, $5.50.

Rosin Size

Demand steady. Supply good. Seventy percent gum and pale wood grades, tank cars, $5.54 to $5.70 f.o.b. southern shipping point.

Salt Cake

Supply ample. Demand good. Domestic quoted at $22.00/$24.00, f.o.b. shipping point, freight allowed to destination.

Soda Ash

Demand improved; supply adequate. Current prices, car lots per 100 pounds; light ash in bulk, $1.00; in paper bags, $1.25.

Starch, Corn

Demand strong. Supply ample. Prices strong. Pearl grade currently quoted at $4.72 per 100 pounds; powdered starch at $4.83 per 100 pounds; white corn dextrine at $5.99 per 100 pounds; car lots, f.o.b. Chicago.

Starch, Potato

Heavy paper and textile demand. Supply tightened by crop conditions. Prices nominal. Idaho high grade quoted at $7.25 cwt. l.c.l., ex N. Y. whse. New production quoted at $5.25 cwt., car lots, f.o.b. shipping point. Maine production makes slow start on heavy order backlog. Quoted at $5.10 cwt. f.o.b. shipping point.

Sulphate of Alumina

Demand steady. Prices firm. Supply good. The commercial grades are quoted from $1.50 per 100 pounds, in bags, car lots, f.o.b. works. Iron free is $2.75 per 100 pounds in bags, car lots, at works.

Sulphur

Supply ample. Demand sustained at good level. Prices firm. Annual contracts are quoted at $18 per long ton, f.o.b. mines; $19.50, f.o.b. vessels, Gulf ports. Export price f.o.b. Gulf ports is $22.00 per long ton.

Talc

Demand continues far ahead of supply. Prices steady. Domestic grades are currently quoted at $23 to $28 per ton in 50-lb. paper sacks, car lots, f.o.b. mills; Canadian at $35 and up per ton.

Tapioca Flour

Prices unchanged. Supply liberal. Fair demand. Dextrinizable grades range from $9.00/$9.90 cwt. for superior high grades to $8.25/$8.75 cwt. for highs, on dock Atlantic and Gulf ports. Medium grades range from $7.00/$7.50 cwt. on dock, N. Y., and are tight in supply, prices firm.

Titanium Dioxide

Demand strong. Prices firm. Output threatened by steel strike. Anastase 19½c pound carload lots, 20c l.c.l., rutile, 21½c pound carload lots, 22½c l.c.l.; 50-pound bags, f.o.b. plant, actual freight allowed.

IMPORTS — EXPORTS

IMPORTS AT NEW YORK

Week Ending Nov. 26

Newsprint

Malden Reeve Angel & Co., Inc., Mormacmail, Helsingfors, 66 rolls.

Hearst Enterprises, Inc., Fort Avalon, Cornerbrook, 315 rolls.

N. Y. World Telegram, Fort Avalon, Cornerbrook, 793 rolls.

Bato Co., Fort Avalon, Cornerbrook, 89 rolls.

Castle & Overton, Inc., Fort Avalon, Cornerbrook, 139 rolls.

Bulkley Dunton Co., Fort Avalon, Cornerbrook, 59 rolls.

R. A. Olsen, Kermic, Donnacona, 349 rolls.

News Syndicate Co., Ethel Tombs, Gatineau, 290 rolls.

R. A. Olsen, Newscarrier, Donnacona, 377 rolls.

H. C. Craig Co., A.C.D., Donnacona, 417 rolls.

R. A. Olsen, Donpaco, Donnacona, 359 rolls.

Montmorency Paper Co., Simconon, Botwood, 4173 rolls.

Wall Street Journal, Cornerbrook, Cornerbrook, 82 rolls.

N. Y. World Telegram, Cornerbrook, Cornerbrook, 2031 rolls.

N. Y. Sun, Cornerbrook, Cornerbrook, 950 rolls.

Hearst Enterprises Inc., Cornerbrook, Cornerbrook, 569 rolls.

N. Y. Times, Cornerbrook, Cornerbrook, 1469 rolls.
Castle & Overton, Inc., Cornerbrook, Cornerbrook, 636 rolls.
Bato Co., Cornerbrook, Cornerbrook, 160 rolls.

Surface Coated Paper

Gevaert Co. of America, Bastogne, Antwerp, 6 cs. (unfinished).

Printing Paper

Stevens Nelson Paper Corp., American Packer, London, 2 cs.
H. Reeve Angel & Co., Inc., American Packer, London, 2 cs.
Olympic Shipping Co., Vibeke Maersk, Rouen, 45 cs.

Filter Paper

H. Reeve Angel & Co., Inc., American Packer, London, 12 cs.

Paperhangings

C. A. Haynes & Co., American Packer, London, 25 bls.

Parchment Paper

G. G. Lippelgoes, Alwaki, Hamburg, 1 cs.

Wallpaper

C. R. Gracie & Sons, American Packer, London, 3 cs.
Intermaritime Forwarding Co., Parthia, Liverpool, 4 cs.
C. A. Haynes & Co., Parthia, Liverpool, 20 ctns.

Tissue Paper

B. F. Drakenfeld & Co., Parthia, Liverpool, 32 cs.
W. J. Byrnes & Co., Parthia, Liverpool, 1 cs.

Gummed Paper

B. F. Drakenfeld & Co., Parthia, Liverpool, 14 cs.

Tracing Cloth

E. Dietzgen & Co., Parthia, Liverpool, 10 cs. (bleached cotton).

Wrapping Paper

Jay Madden Corp., Mormacmail, Helsingfors, 56 rolls.

Miscellaneous Paper

Siber Hegner Co., Inc., Pioneer Dale, Kobe, 6 cs.
Stevens Nelson Paper Corp., Pioneer Dale, Kobe, 5 cs.
R. Wilson Paper Corp., Mormacmail, Gothenburg, 1 roll.

Rags, Baggings, etc.

E. J. Keller Co., Inc., Lord Glentoran, Glasgow, 88 bls. bagging.
Chase National Bank, Lord Glentoran, Glasgow, 118 bls. bagging.
Williamson Northrup Co., Mormacdove, Santos, 287 bls. cotton waste.
Williamson Products Co., Mormacdove, Rio de Janeiro, 95 bls. cotton waste.
Brandwein Mazur Co., Excelsior, Bombay, 480 bls. cotton waste.
Railway Supply & Manufacturing Co., Excelsior, Bombay, 50 bls. cotton waste.
Lush Cotton Products Co., Excelsior, Bombay, 100 bls. cotton waste.
Royal Manufacturing Co., Excelsior, Bombay, 300 bls. cotton waste.
M. O. Schimmel, Excelsior, Bombay, 120 bls. cotton waste.
Brandwein Mazur Co., American Packer, Bremen, 94 bls. bagging.
L. Gottlieb Co., Inc., American Packer, London, 96 bls. bagging.
A. Siegle Corp., Parthia, Liverpool, 238 bls. jute waste.
E. Butterworth & Co., Inc., Parthia, Liverpool, 56 bls. old bagging.
(———), Noordam, Rotterdam, 49 coils manila warps.
New England Waste Co., Noordam, Rotterdam, 158 bls. cotton waste.
J. J. Rozendaal, Alwaki, Hamburg, 263 bls. cotton waste.
Amicale Wool Service Co., Alwaki, Hamburg, 2 bls. flaxwaste.
Chase National Bank, Alwaki, Hamburg, 74 bls. cotton waste.
J. Eisenberg, Alwaki, Hamburg, 7 bls. rags.
Railway Supply & Manufacturing Co., Alwaki, Hamburg, 250 bls. cotton waste.
(———), Alwaki, Hamburg, 216 bls. flaxwaste.
National City Bank, Alwaki, Rotterdam, 119 bls. cotton waste.

Gluestock

National City Bank, Pioneer Dale, Manila, 160 bags.

Woodflour

The Burnet Co., Mormacmail, Gothenburg, 4 bags.

IMPORTS AT ALBANY

Week Ending Nov. 26

Pagel Horton & Co., Inc., Colombia, Gefle, 7500 bls. dry sulphite pulp, 2546 bls. woodpulp.
Pagel Horton & Co., Inc., Colombia, Husum, 2 bls. dry sulhite pulp, 1067 bls. dry bleached sulphate pulp.
Pagel Horton & Co., Inc., Colombia, Hornefors, 1068 bls. dry sulphite pulp.
(———), Colombia, Iggesund, 500 bls. bleached sulphate pulp, 500 bls. semi bleached sulphate pulp.
Perkins Goodwin & Co., Colombia, Hernosand, 3048 bls. half prime strong sulphite pulp.
Pulp & Paper Trading Co., Colombia, Hernosand, 609 bls. 1st quality strong sulphite pulp.
Cellulose Sales Co., Colombia, Hernosand, 2100 bls. sulphate pulp, 3180 bls. sulphite pulp.

IMPORTS AT BOSTON

Week Ending Nov. 26

J. J. Rozendaal, Alwaki, Antwerp, 200 bls. cotton waste.
Gottesman & Co., Inc., Minnesota, Iggesund, 500 bls. bleached kraft.

IMPORTS AT PHILADELPHIA

Week Ending Nov. 26

Evening Bulletin, Cornerbrook, Cornerbrook, 681 rolls newsprint.
Philadelphia Inquirer, Cornerbrook, Cornerbrook, 668 rolls newsprint.
Castle & Overton, Inc., Cornerbrook, Cornerbrook, 86 rolls newsprint.
E. W. Twitchell, Mormacmail, Gothenburg, 64 rolls paper.
Madden Reeve Angel & Co., Inc., Mormacmail, Helsingfors, 272 rolls newsprint.
Pulp Sales Corp., Mormacmail, Helsingfors, 530 bls. prime unbleached strong sulphite pulp, 1778 bls. white dry mechanically ground woodpulp.
Jay Madden Corp., Mormacmail, Helsingfors, 53 rolls wrapping paper.
Gottesman & Co., Inc., Mormacmail, Stockholm, 3556 bls. dry bleached sulphite pulp.
Gottesman & Co., Inc., Minnesota, Iggesund, 1450 bls. bleached sulphite.

IMPORTS AT NORFOLK

Week Ending Nov. 26

Montmorency Paper Co., Simconon, Botwood, 980 rolls newsprint.
Danville Register, Cornerbrook, Cornerbrook, 136 rolls newsprint.
Herald Sun Paper, Cornerbrook, Cornerbrook, 41 rolls newsprint.
Fayetteville Observer, Cornerbrook, Cornerbrook, 90 rolls newsprint.
Kannapolis Independent, Cornerbrook, Cornerbrook, 76 rolls newsprint.
Norfolk Newspapers, Cornerbrook, Cornerbrook, 154 rolls newsprint.
Raleigh News & Observer, Cornerbrook, Cornerbrook, 530 rolls newsprint.
Salisbury Post, Cornerbrook, Cornerbrook, 181 rolls newsprint.
Asheville Citizen Times, Cornerbrook, Cornerbrook, 250 rolls newsprint.
Ennis Tag & Saleslook Co., Cornerbrook, Cornerbrook, 190 rolls newsprint.
Raleigh Times, Cornerbrook, Cornerbrook, 169 rolls newsprint.
Lonmar Textile ByProducts Co., Alwaki, Antwerp, 242 bls. jute millwaste.

IMPORTS AT BALTIMORE

Week Ending Nov. 26

Pulp Sales Corp., Mormacmail, Helsingfors, 850 bls. white dry mechanically ground woodpulp.
Pagel Horton & Co., Inc., Colombia, Gefle, 1534 bls. woodpulp.
Pagel Horton & Co., Inc., Colombia, Kopmanholman-Husum, 610 bls. dry bleached sulphite pulp, 1219 bls. dry unbleached sulphate pulp.
Price & Pierce, Ltd., Colombia, Husum, 3080 bls. dry chemical pulp.
Pagel Horton & Co., Inc., Colombia, Hornefors, 3966 bls. dry sulphite pulp.
(———), Colombia, Iggesund, 1000 bls. semi bleached sulphite pulp, 750 bls. prime bleached sulphite pulp.
Cellulose Sales Co., Colombia, Hernosand, 546 bls. mechanical woodpulp, 600 bls. sulphate pulp, 1800 bls. sulphite pulp.
Cellulose Sales Co., Colombia, Stugsund, 750 bls. dry sulphite pulp, 1250 bls. dry sulphate pulp.
Gottesman & Co., Inc., Colombia, Iggesund, 1000 bls. bleached kraft.
Gottesman & Co., Inc., Minnesota, Iggesund, 1500 bls. bleached kraft.

IMPORTS AT NEWARK

Week Ending Nov. 26

Cellulose Sales Co., Colombia, Copenhagen, 835 bls. dry bleached sulphite pulp.
Perkins Goodwin & Co., Colombia, Hernosand, 1522 bls. half prime strong sulphite pulp.
Cellulose Sales Co., Colombia, Hernosand, 1638 bls. mechanically ground woodpulp, 165 bls. sulphite pulp, 1800 bls. sulphate pulp.

U. S. Wood Pulp Imports

NEW YORK — Woodpulp imports in the year's ten months dropped 30 percent from 1948's period, according to BOC figures. Scandinavian cut is 53 percent or 278,098 tons.

TRAFFIC • • • • •

Addition to Rule 34

By EDWIN CHESTER HASTINGS

The rail freight classification will have an addition to Rule 34, effective December 12 of interest to paper firms. It relates to minimum carload weights of shipments in closed cars (box cars).

While all paper items are not subject to Rule 34, a large number of paper articles are listed in the classification with a specific reference to the rule. For example, the carload minimum weight is often referred to in the following manner "20,000R". The meaning of this is that freight charges will be assessed on no less than 20,000 pounds, and if the lading is loaded into a car *over 40'7"*, the minimum weight is subject to Rule 34's increased weight table. The only exception that will apply or change the above condition is when the carrier fills the shipper's request with a longer car than ordered. The minimum weight, however, will be increased when the shipper ordering the shorter car fills the "loading capacity" of the longer car supplied by the carrier. This may be clearly noted in the rewording of Rule 34's, Section *2* (a) and the addition of Note 1-A to the section that will be effective Dec. 12th in Supplement #30 to CFC#18:

When shipper orders a closed car not less than 40 feet in length, and carrier is unable to furnish car of length ordered and furnishes longer car, minimum weight shall be that fixed for car ordered, except that when loading capacity of car is used, minimum weight shall be that fixed for car furnished.

Notation must be made by agent on Bill of Lading and Waybills "Car—feet in length ordered by shipper and car—feet in length furnished by carrier under Rule 34 of Consolidated Classification."

An order for a car 40 feet in length will be construed as an order for a car of any length from 40 feet to 40'7" inclusive.

A new paragraph added to Rule 41, Section 11, in Supplement #30, is important. It states that the glue or adhesive used is required to be a product which *cannot be dissolved in water* after the film application has dried. The section relates to "construction joints" or corrugated fibre boxes. The new information (paragraph—d) pertains to the sides of boxes. The "forming-joint" must not lap less than one and one-half inches. The entire area, throughout, must be firmly glued where contact is made, with the type of adhesive previously mentioned.

The supplement also provides that *"Crinkled Lining Paper, formerly only shipped in bales or rolls, is now permitted to move also in boxes."*

Canadian Carloadings

OTTAWA—Revenue freight loaded on Canadian railways showed 3,876 cars of woodpulp and paper in the week ending November 12 this year compared with 4,014 in the preceding week and 4,227 in the similar week a year ago, the Canadian Government reports.

The Eastern Division accounted for 3,363 cars for the week, as against 3,467 in the previous week and 3,608 in the similar week of last year, with the Western Division showing 513 cars in the week compared with 547 in the preceding week and 619 in the same week a year ago.

In the cumulative period from the first week of 1949 until the week ending November 12, there were 175,758 cars of woodpulp and paper as compared with 190,801 in the similar period of last year. The Eastern Division registered 153,660 cars this year against 165,886 a year ago and the Western Division 22,098 cars this year against 24,915 last year in the corresponding period.

MEETINGS . . . . .

ASSOCIATION EXECUTIVES: Please send us your meeting dates and locations for this column as far in advance as possible. No charge for publication.

NOVEMBER 28-DECEMBER 3: 22nd Exposition of Chemical Industries, Grand Central Palace, New York, N. Y. For details, write to Charles F. Roth, Mgr., International Exposition Co., Grand Central Palace, N. Y. 17, N. Y.

DECEMBER 1-2: American Management Association, Finance Division, Waldorf-Astoria, New York, N. Y.

DECEMBER 4-7: American Institute at Chemical Engineers, Annual Meeting, Pittsburgh, Pa.

DECEMBER 15-16: American Management Division, Insurance Division, The Drake, Chicago.

1950

JANUARY 18-20: American Management Assn., General Management, St. Francis, San Francisco, Calif.

JANUARY 25-27: Canadian Pulp & Paper Assn., 1950 Annual Meeting, Technical Section, Mount Royal Hotel, Montreal. For detail write to Douglas Jones, Sec.-Engnr., Technical Sec., C.P.P.A.

FEBRUARY 13-15: American Management Assn., Personnel Div., Palmer House, Chicago, Ill.

FEBRUARY 19-25: A.P.P.A., Annual Meeting, Waldorf-Astoria, New York City. For details write to E. W. Tinker, Exec.-Sec., 122 East 42nd St., New York 17, N. Y.

FEBRUARY 20-22: National Council for Stream Improvement, Annual Meetings, Waldorf-Astoria, New York City.

FEBRUARY 21: SAPI Luncheon, Hotel Waldorf-Astoria, New York City. For details, write to E. G. Amos, Sec.-Treas., Salesmen's Association of the Paper Industry, 122 E. 42nd St., New York 17, N.Y.

FEBRUARY 23: A.P.P.A. Dinner, Annual Meeting, Waldorf-Astoria, New York City. For details write to E. W. Tinker, Exec.-Sec., 122 E. 42nd St., New York 17, N. Y.

FEBRUARY 26-MARCH 1: American Institute of Chemical Engineers, Regional Meeting, Rice Hotel, Houston, Texas.

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RALPH E. BRIGGS, Sales Manager

● BRADFORD WEST, *Pittsfield, Mass.* ● WILLIAM N. CONNOR, *Jr., Canton, Mass.* ● L. H. BREYFOGLE, *Kalamazoo, Mich.* ● ● WALTER A. SALMONSON, *2514 Northeast 59th Ave., Portland, Oregon* ● L. L. GRIFFITHS, *Jr., Kalamazoo, Mich.* ● ● HAROLD H. FISH, *Syracuse, N. Y.* ●

FEBRUARY 27-MARCH 3: American Society for Testing Materials, Committee Week & Spring Meeting, Hotel William Penn, Pittsburgh, Pa.

MARCH 6-10: Fourth Annual Conference, Australian Pulp & Paper Industry, Technical Association.

MARCH 13-15: National Assn. of Waste Material Dealers, Inc., 37th Annual Convention, Waldorf-Astoria, New York City.

MARCH 15-17: American Management Assn., Marketing Div., Hotel Statler, New York City.

MARCH 27-29: National Paper Trade Assn., Annual Convention, Hotel Waldorf-Astoria, New York City.

APRIL 3-5: American Management Assn., Production Div., Hotel Statler, New York City.

APRIL 24-26: American Management Assn., Packaging, Packing & Shipping Conference, Navy Pier, Chicago, Ill.

APRIL 24-27: American Management Assn., 19th National Packaging Exposition, Navy Pier, Chicago, Ill.

MAY 22-24: American Management Assn., Insurance Div., Hotel Statler, New York City.

MAY 31-JUNE 2: Canadian Pulp & Paper Assn., 1950 Summer Meeting, Technical Section, Chateau Frontenac Hotel, Quebec City. For details, write to Douglas Jones, Sec.-Engnr., Tech. Section, C.P.P.A.

JUNE 1-2: American Management Assn., General Management, Waldorf-Astoria, New York City.

JUNE 8-10: American Institute of Chemical Engineers, Regional Meeting, Statler Hotel, Boston, Mass.

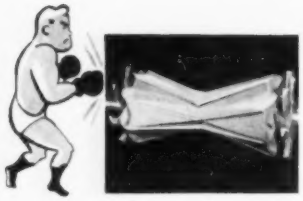
JUNE 26-30: American Society for Testing Materials, 53rd Annual Meeting, Ninth Exhibit of Testing Apparatus and related equipment, Chalfonte-Haddon Hall, Atlantic City, N. J.

SEPTEMBER 10-13: American Institute of Chemical Engineers, Regional Meeting, Minneapolis, Minn.

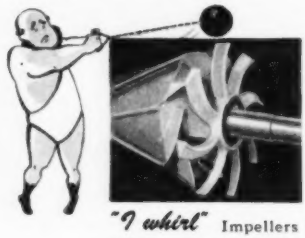
SEPTEMBER 11-23: 6th Educational Graphic Arts Exposition, International Amphitheatre, Chicago, Ill.

DECEMBER 3-8: American Institute of Chemical Engineers, Annual Meeting, Columbus, Ohio.

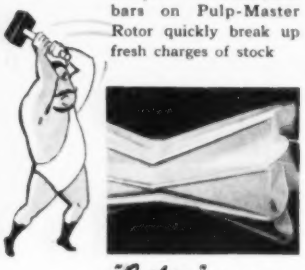
4-way PULPING POWER!



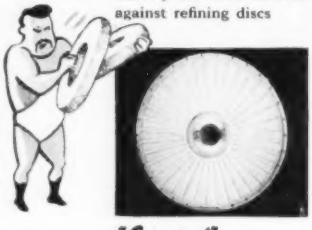
"I pound" Diagonal bars on Pulp-Master Rotor quickly break up fresh charges of stock



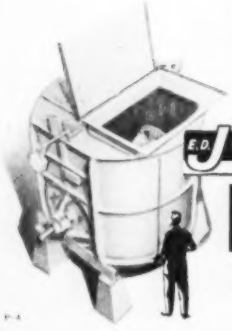
"I whirl" Impellers agitate stock until sufficiently reduced to rub against refining discs



"I slam" Cone shape of Pulp-Master Rotor forces stock violently against sides of tank



"I grind" Refining discs at sides of tank have radial bars against which stock is rubbed by impellers



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MARKETS

Pulp, Paper and Board Industry November, 1949, Report

By W. LE ROY NEUBRECH

Chief, Pulp and Paper Section
U. S. Dep't., of Commerce
Office of Domestic Commerce,
Forest Products Div.

ECONOMIC REVIEW

(Excerpted)

Notwithstanding the October decline in over-all industrial production, caused largely by the effects of the work stoppages in coal and steel accompanied by a falling off in aggregate consumer expenditures and retail sales on a seasonally adjusted basis, paper and board production rose sharply to record the largest monthly output for the year. According to preliminary estimates, the Nation's October output of paper and board came close to meeting the all time monthly high point established in October 1948. The month of October is normally a seasonally strong month in the paper industry and trade because of the wide use of paper and board in the holiday season business of many industries, wholesalers and retailers.

Viewing industry trends in September, October and early November, it was an unusual pattern, however, for aggregate total industrial production to be veering downward, while the output of paper and board was rising. This may be explained by viewing several relevant factors. First, the effects of the work stoppages in steel and coal affected predominantly production and employment in the heavy industries. Unemployment and consequent declines in retail sales were more evident in the immediate areas of these industries. On the other hand, the soft goods industries in general maintained a strong level of production, thereby tending to offset the losses in some of the hard goods. The fact that paper and board predominantly go into the packaging and distribution of soft goods gave strength to the demand for paper, board and its products. Seasonal advertising lent a boost to printing paper demands.

As the paper and board industry entered early November with a continuation of a strong market demand, the work stoppages in the heavy industries appeared to be nearly settled, giving rise to further optimism for a high level of activity ahead. Paper and board manufacturers observe that

October demand undoubtedly would have been even greater had not the Nation's economy been affected by the major work stoppages in coal and steel.

In some industry circles at least, certain favorable elements can be seen as partly offsetting the losses to the national economy by the prolonged steel and coal strikes. The peaks in aggregate industrial output and consumer expenditures that probably would have been reached in October and November this year were apparently flattened out, thereby extending the current period of generally high personal income and expenditures into a longer period ahead. In particular, inventory replacements in the coal, steel and closely related industries apparently will take many weeks of full output, let alone the needs of such products for current consumption. Paper and board manufacturers view this as at least one area of consumption where demand for packaging of innumerable metal products affected by the strikes should be strong for some time ahead.

Besides purchasing for actual consumption, there was reported substantial ordering for replenishment of paper and board inventories by converters, wholesale paper merchants, printers and publishers, and the general retail trade. Numerous instances were reported by Commerce Department field offices of converters not being able to operate at desired capacity, because of lack of stocks for processing, to fill pressing customer needs. A number of wholesale paper merchants also were said to be in a similar position — losing current orders for lack of inventory of desired items.

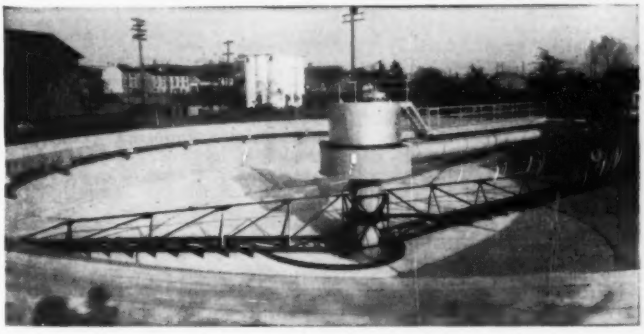
Only this summer, paper and board mill order files were so low that some mills shut down completely for periods of time, with many other plants operating only three or four days a week. Converters and wholesale merchants alike were striving for business, while holding down buying for inventory. As expected, prices weakened during this period. Now, numerous mills report order files for five or six weeks ahead, with most mills operating six or seven days a week. Prices have firmed and on some items advanced. Caution is indicated that in buying, especially for inventory, care be exercised not to over-buy, for a steadiness in volume and prices is considered preferable by all segments of the industry to one of uncertainty and change. They view these circumstances as elements of previous experiences of business cycles and readjustment periods in terms of prices and inventories when the tendency is for the swings to go too far before management decides upon corrective measures.

Labor-management relationships in the pulp and paper industry are historically good, and the year 1949 was no exception. Only a very few strikes have occurred this year, primarily in a few small companies. Partly because of the downward trend in production and prices during the first half of the year, both management and labor were unable to view the situation optimistically, with the result that in most instances wage rates remained unchanged, though labor concessions were obtained in the form of one or two additional paid holidays and longer paid vacations, in some cases up to three weeks for veteran employes. Seniority clauses were overhauled in some instances. In the paper and board converting industries wage increases for two to five cents per hour were obtained. Converting plant labor in general, where a large percentage of female labor is utilized, is not considered as highly skilled as in paper and pulp operations and the level of hourly wages have been relatively lower. Both management and labor expect the generally friendly relationships to continue.

PRICES

With only a few exceptions, prices on most grades of paper and board firmed or rose moderately during October, U. S. Commerce Department Field Offices reported. Apparently kraft products were the principal items recording price advances in the past several weeks.

"Can't be beat . . . for water supply or white water."



HARDINGE CIRCULAR CLARIFIERS

Hardinge Clarifiers have proven their worth in paper plants for removal of settleable solids and in recovering fiber and filler from white water, leaving it sufficiently clear to be reused in the process. They may also be used for clarifying the plant water supply.

In localities where water rates are high, your own water supply or waste water treating system can save you money.

Hardinge Circular Clarifiers are available with either steel or concrete tanks. Their scraper mechanism removes solids rapidly through a central discharge. They are also used in conjunction with chemical treatment and flocculation.

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Buyers in the New England area continue to play one merchant against another in an effort to get the best price. Quality is demanded by buyers and no substitutes are accepted. In this region, the price of low grade No. 2 tissue paper, which the trade considered far too low, increased 10 percent during October.

Prices are stable in the South. Board prices, which had dropped six to 10 percent in previous months, are expected to show increasing firmness for the remainder of the year.

Although an increase of five dollars per ton in kraft paper prices was reported in the New York area, at least some buyers built up their inventories prior to this price rise. Bags had two increases of five percent each in price in recent weeks.

In the Middle West, kraft paper prices showed a further strengthening during October, while other prices remained steady.

Mills in the Pacific Northwest reported no major price adjustments in October. On the other hand, wholesalers indicated some minor adjustments — both up and down — in their price schedules.

Data from the Bureau of Labor Statistics on wholesale prices in September indicate increases for folded newsprint; old corrugated boxes; chipboard, unlined (central territory); and liners (central territory); a decrease for tissue paper; and no change in prices of other grades of wood pulp, waste paper, paperboard, and paper.

Because the Bureau of Labor Statistics price index on paper is restricted to only a few grades at a few market points, the index apparently is not sensitive to price changes on the many other important grades and market points. Furthermore, the paper index is fairly weighted with newsprint which, because of long term contracts, remains at a steady level for months at a time.

AMERICAN PAPER AND PULP ASSOCIATION'S PAPER PRODUCTION RATIO REPORT

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1949		Corresponding Weeks—1948	
Oct. 15	97.9	Oct. 16	99.9
Oct. 22	99.0	Oct. 23	98.7
Oct. 29	98.5	Oct. 30	99.3
Nov. 5	99.3	Nov. 6	97.0
Nov. 12 (Revised)	99.9	Nov. 13	99.6
Nov. 19	100.6	Nov. 20	100.8

COMPARATIVE MONTHLY SUMMARIES

1948						1949	
Jan.	100.1	May	100.5	Oct.	99.1	Jan.	94.6
Feb.	99.8	June	95.7	Nov.	97.1	Feb.	92.8
Mar.	100.8	July	85.3	Dec.	87.1	Mar.	89.1
Apr.	100.8	Aug.	96.8			Apr.	85.1
		Sept.	91.8	Year Avg.	96.2	May	82.7
						June	78.6
						July	72.8
						Aug.	‡88.0
						Sept.	‡90.3
						Oct.	‡98.0

‡ Preliminary.

COMPARATIVE YEARLY SUMMARIES

	1942	1943	1944	1945	1946	1947	1948	1949
Year to Date	91.5	87.6	88.5	89.3	101.4	104.5	97.2	88.1
Year Average	90.4	87.8	88.1	89.4	101.1	104.3	96.2	

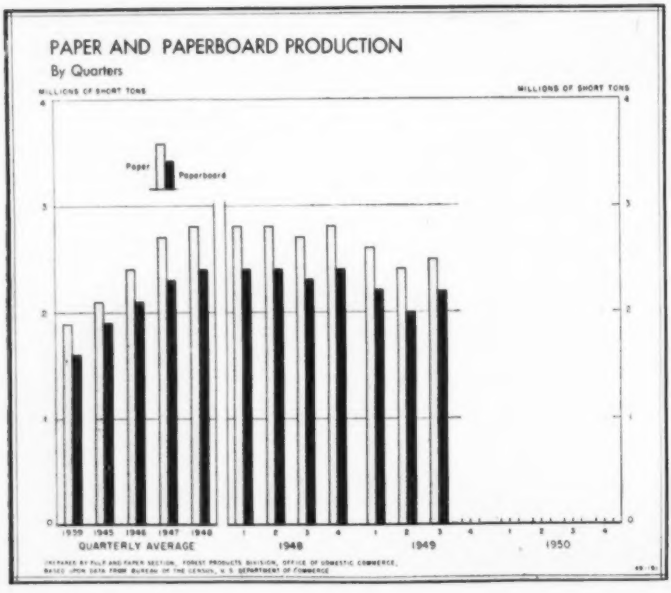
PAPERBOARD OPERATING RATIOS†

Current Weeks—1949		Corresponding Weeks—1948	
Oct. 15	94	Oct. 16	97
Oct. 22	94	Oct. 23	95
Oct. 29	94	Oct. 30	96
Nov. 5	92	Nov. 6	95
Nov. 12	94	Nov. 13	96
Nov. 19	94	Nov. 30	97

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1948	99	100	102	102	100	94	81	92	91	96	94	84	95
1949	88	85	79	79	78	75	64	86	87	94			

* All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Association.



OBITUARIES

Francis James Hood, 44, president of the Ansul Chemical Co., Marinette, Wis., died on November 10 in New York City, while on a business trip. Mr. Hood was elected to the Ansul presidency less than a year and one-half ago. Before that he had served as vice-president, secretary-treasurer, and originally, California representative.

Alton Chester Gardner, 65, of the St. Petersburg, Fla., branch of the Pinellas Paper Co., died in a hospital in that city late in November. Surviving are his widow, Mrs. Della Gardner; a brother, Victor; and two sisters, the Misses Sarah and Ethel Gardner.

Jess G. Smith, 79, Boston district sales manager of the Southern Kraft Corp., and Lily-Tulip Corp., died at Hotel Vendome, where he made his home, on November 26. Surviving are his widow, Mrs. Emily Cobb Smith and two sons, J. Gilbert, Jr., and Ward Cobb Swift.

Theodore Thompson, 27, on the staff of Canadian International Paper Co., Gatineau, Que., died in an Ottawa hospital on November 15, following a short illness. He is survived by his widow.

George X. Miller, 71, secretary-manager since 1944 of the Canadian Forestry Ass'n., died in a Vancouver, B. C., hospital late in November. He is survived by a son, G. Stanley Miller.

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for all equipment exposed to corrosion by sulphite acids or other corrosive agents
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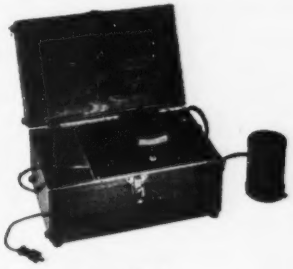

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Brightness and Opacity
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tests on paper, cardboard and other paper products.
Portable, reliable, rugged, simple to operate
PHOTOVOLT CORP.
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Also: Colorimeters, pH Meters

CLEARING HOUSE

HELP WANTED

WANTED
MACHINE ROOM FOREMAN

For modern Fourdrinier high speed mill manufacturing high grade chemical bleached papers. Permanent position for man who has demonstrated his ability and can furnish references from previous employers as to ability, sobriety and character. Give full information in first letter regarding education, experience, names of former employers and length of time employed in each plant. Address in confidence Charles P. Raymond Service, Inc., Paper Mill Dept., 294 Washington Street, Boston, Mass. D-1

WANTED—Mechanical engineer for plant layout, machine design and process engineering, capable of design and drafting work. Permanent position with advancement for qualified man. Paper or board mill experience desirable but not essential. Give complete information in first letter including references and salary requirement. Address Box 49-532 care Paper Trade Journal. D-29

WANTED: Experienced steam and power plant Engineer for a Paper Mill having two 500 H.P. modern boilers and 1000 KW generating capacity.

Prefer man with paper mill experience. Give age, qualifications, and salary expected. Box No. 42-560 care Paper Trade Journal. D-1

Sales promotion and advertising man for old established house handling fine papers and printing equipment. Must have had experience in same kind of work for fine paper merchant. Not necessary to have had experience in equipment business. Want man to handle direct mail advertising, keep mailing lists corrected, contact mills for samples and see that they are promptly and properly distributed. To assist in preparation of price-lists and catalogs.

Headquarters in New Orleans but some time will be spent at branches in Dallas, Houston, Miami and Tampa. Write R. W. Buckley, Vice-Pres. & Gen'l Manager, E. C. Palmer & Co., Ltd., P. O. Box 680, New Orleans (7), La. D-1

WANTED — SUPERVISOR, experienced; paper board, laminating, lining and coating. An excellent opportunity for one with above experience and mechanical ability. Address Box 49-570 care Paper Trade Journal. D-1

TOUR BOSS and MACHINE TENDER. Steady jobs, good living area, Eastern Pennsylvania flooring and roofing Felt Mill. Cylinder machine experience essential. Particularly interested in flooring felt makers. Write qualifications Box 49-572 care Paper Trade Journal. D-8

WANTED: TECHNICIAN with mill experience on book and bond grades. Knowledge of surface sizing and specialty papers desired. Address Box 49-571 care Paper Trade Journal. D-22

HELP WANTED

SALARIED POSITIONS $3,500—$35,000

If you are considering a new connection communicate with the undersigned. We offer the original personal employment service (39 years recognized standing and reputation). The procedure, of highest ethical standards, is individualized to your personal requirements and develops overtures without initiative on your part. Your identity covered and present position protected. Send only name and address for details.

R. W. SIXBY, INC.
117 Dun Bldg., Buffalo 2, N. Y.
TF

ADJUSTER—Paper Bag Machines, Potdevin and Lockport flat, square, sack, New York City. Excellent opportunity. State experience. Address Box 49-542 care Paper Trade Journal. D-29

WANTED by paper machinery manufacturer located in East an experienced Erecting Supervisor for field work. In reply give age and qualifications. Address Box 49-558 care Paper Trade Journal. D-1

SALESMAN for Metropolitan New York. Salary basis. Desired by National bag manufacturer. Prefer man with multiwall experience. All replies strictly confidential. Our employees know of this advertisement. Address Box 49-561 care Paper Trade Journal. D-1

CYLINDER MACHINE TENDERS experienced on Corrugating Medium. Union scale wages. References required. STOCKPORT PAPER CORPORATION, Stockport, N. Y. D-1

MEN WANTED
Positions Open

President and General Manager mill producing high grade lightweight papers; general superintendents for mills making book, offset, wall paper, bond, envelope, mimeograph, writing, glassine, greaseproof and specialty papers (2 openings); general superintendent folding box board mill; superintendent wet machine board mill; superintendent kraft pulp mill; night superintendent Fourdrinier machine mill, book and offset papers.

Chemists and chemical engineers for mills, also chemist for technical service and development work with chemical manufacturing concern; foreman paper coating department; salesman to sell stationery papers in New England; salesmen to sell book, envelope, offset, index bristol, sulphite bond and ledger papers, also paper bags in Mid West territory; salesman for board products in New England and upper New York State.

Chief power plant engineer, master mechanic; millwright; plant engineer; mechanical engineer; machine tenders; bark tenders; four bosses Fourdrinier and Cylinder machines.

We invite correspondence (confidential) with executives seeking positions and with employers seeking new personnel.

CHARLES P. RAYMOND SERVICE, Inc.
294 Washington Street, Boston, Mass.
D-1

SITUATIONS WANTED

EXECUTIVE AVAILABLE

Executive position wanted in paper processing firm or wholesale paper house. Am 41 years old, have excellent production, engineering and administrative background. 15 years experience in production control, purchasing and merchandising. At references. Address Box 49-566, care Paper Trade Journal D-1

SITUATIONS WANTED

WOOLEN WET FELTS AGENCY

Belgian manufacturer, widely known throughout Europe for quality paper machine clothing, wants representative or agency capable of importing and selling their woolen wet felts to paper mills in U.S.A.

Offers to Box 49-568
PAPER TRADE JOURNAL
15 West 47th Street
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FOR SALE

50", 64" & 72" BOARD PASTERS—FOR SALE (With or without Paper Lining Stations)

COMBINES FROM ROLLS of 3 or more Plys, all types of Board (Chip, News, Kraft, Bristol, etc.)—producing various sheet dimensions and finished calipers. New and/or Rebuilt Stations consist of: ROLL STANDS, GLUE STATIONS, PRESS ROLLERS, SLITTER STATIONS, CUT-OFF KNIFE & CONVEYORS—all of standard makes and "on hand" for prompt delivery. We install, guarantee and instruct operations. Box 49-567, care Paper Trade Journal.
TF

FOR SALE—New 64" Maier Rotary Cut-Off Knife, cuts 32" to 120" sheet lengths up to ¾" thick board; new 100" Knowlton Bar Creaser with 4-crease widths. GREGGORY, INC., 263 No. Wabash Ave., Chicago, 1, Ill. TF

Brand New Roll for Dilts Breaker Beater for Sale.

Size of Roll 54" face by 62" Outside Diameter. Overall dimension 15' 3¼". Includes roll filling. Address Box No. 49-573 care Paper Trade Journal. D-22

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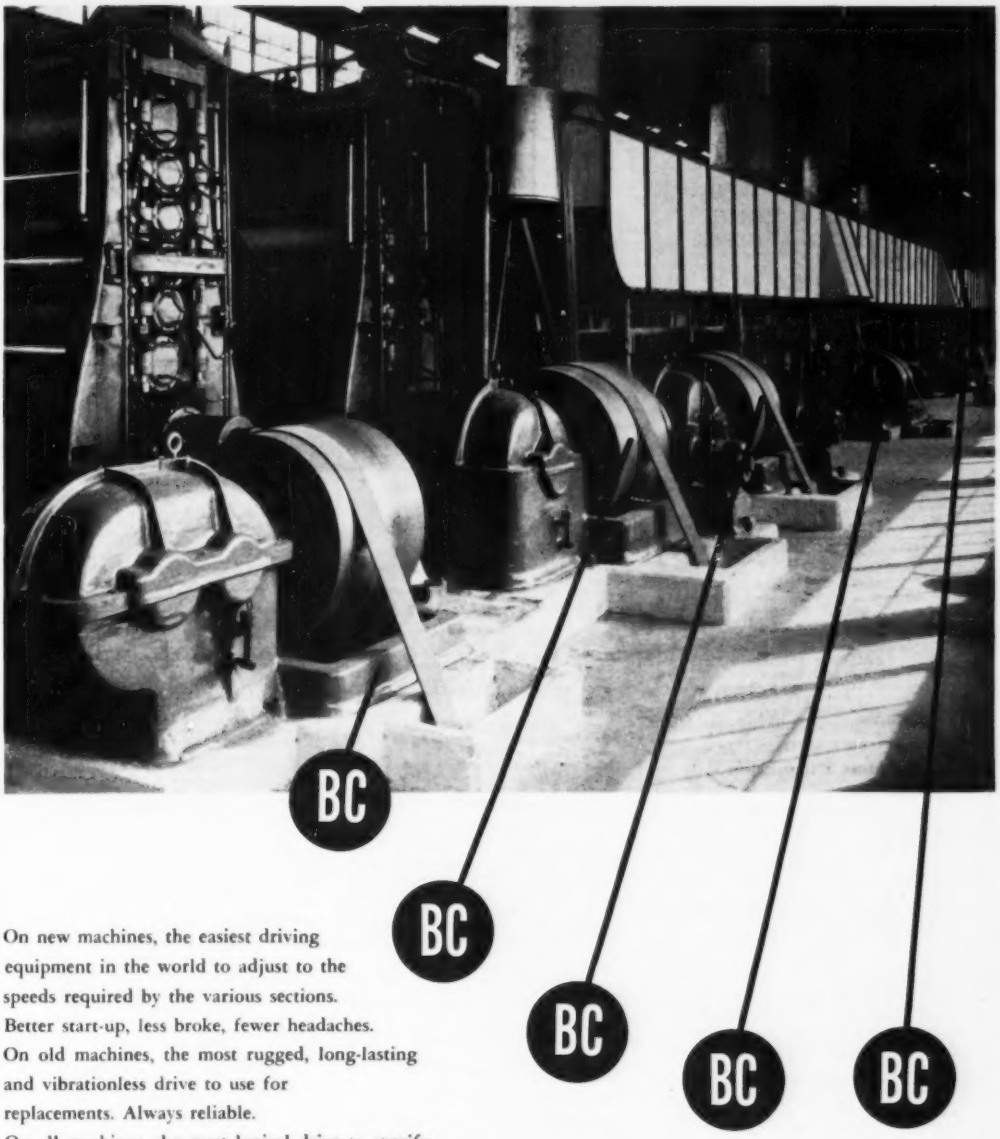

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CALENDER REVERSE—WHATEVER THE SITUATION DEMANDS.

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A PRODUCT OF DILTS

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DILTS MACHINE WORKS, FULTON, NEW YORK
Western Sales Office: Mayer Bldg., Portland, Oregon
Associate: ALEXANDER FLECK LIMITED, Ottawa, Ontario, Canada
Subsidiary: B-C International, Ltd., 16 Catherine Place, Victoria, London S. W. 1, England

FOR SALE

FOR SALE

UNUSED G. E. TURBINE 125 H.P. 900 TO 200 R.P.M. OUTPUT FOR 125# P.S.I. STEAM AT 0° F SUPERHEAT DESIGNED FOR SUBSTANTIAL USE OF EXHAUST STEAM IN PROCESS AT 50 P.S.I. BACK PRESSURE.

Write Box 49-563 care Paper Trade Journal.

D-8

FOR SALE

GOOD VALUES—NEW & USED

60" Hamblet Sheeter with Erie layboy and 10 roll backstand, double deck, with shafts and chucks, also 4 sets of slitters. A fine value.

60" Langston heavy board Slitter.

32" Hobbs shear cut Slitter, rebuilt like new.

3-Color Rotary Web Press, 66" cyl.

39" Chandler & Price Automatic Power Paper Cutter.

New 44" National Auto. Power Cutter.

Baling Presses, both hand and power.

Motors, both A.C. & D.C. for any purpose.

THOMAS W. HALL COMPANY, Inc.

120 West 42nd St., New York 18
(Plant at Stamford, Conn.) TF

FOR SALE

FOR SALE

1—Roll-O-Finer (Manufactured by Paper and Industrial Appliances, Inc.) Complete with G.E. motor, starter and auxilliary equipment. All equipment is in excellent condition. Address: Box 49-546 care Paper Trade Journal. D-1

PAPER COATING MACHINERY MANUFACTURERS — Waxing, Oiling, Carbon, Laboratory Coating and Treating Machines. New improvement. MAYER MACHINE COMPANY, Inc., 1313 Buffalo Road, Rochester 11, N. Y. TF

FOR SALE

1—Plain Extractor Roll 28" diameter x 150" face.
1—Suction Extractor Roll 22" diameter x 150" face.

BARKERS
1—5' Carthage Disc Barker

BEATERS
1—800 lb. Beater—iron tub

BEATER (Laboratory)
1—Dilts Iron Tub Laboratory Beater. Beater roll 14" diameter x 10¼" face, including motor.

BRASS FELT ROLLS
9—4" diameter x 140" face (with bearings).

BREAST ROLLS
1—120" x 14".
1—100" x 14".
2—114" x 14".

CALENDER STACKS
1—72" 5 roll Calendar Stack.
1—76" 7 roll calender stack (heavy duty).

CHIPPERS
2—96" Murray 4 knife Chippers.
1—96" 10 knife Carthage Chipper with 200 h.p. motor.

CORE CUTTERS
1—Core Cutter.

CRUSHER & HAMMERMILL
1—Murray Chip Crusher.
1—Jeffrey Hammermill.

CYLINDER MOULDS
1—36" diameter x 80" face.
1—30" diameter x 72" face.
1—36" diameter x 79" face.

DECKERS
1—Decker—48" diameter x 84" cylinder mold
3—Pusey & Jones Deckers Cylinder molds 42 x 146, anti friction bearings, including rubber covered couch rolls.
3—IMPCO 75½" face x 30" diameter cylinder mold.

DRIVES
2—#4 Reeves Drives.
1—#2 Reeves Drive.
1—Smith & Winchester mortise gear Drive.
1—Foote—7½ h.p. Speed Reducer (Ratio 240 to 1)
2—Smith & Winchester Mortise Gear Drives with 20" diameter clutches—Ratio 8 to 1.
6—Enclosed drives. 75 h.p., ratio 8 to 1. Complete.

DRIVES (Angle)
1—General Machine Company 16 : 1.
1—Philadelphia 50:1 — 1 h.p. — 1200 r.p.m.
1—Philadelphia 21¼:1 — 3 h.p. — 1200 r.p.m.

V-BELT DRIVE
1—21½" diameter x 7½" face, 5 groove.
1—16½" diameter x 7½" face, 5 groove. (With clutch).

DRYERS
13—48" diameter x 112 face.
30—30" diameter x 102" face.
7—24" diameter x 48" face.
9—36" diameter x 72½" face, with gears and bearings.
1—48" diameter x 91" face.
2—25" x 120" (Baby Dryers).
2—36" x 143".
1—24" x 130".
1—60" diameter x 47" face.
3—36" diameter x 96½" face.
1—48" diameter x 70" face.
2—48" diameter x 92" face.
1—48" diameter x 82" face.

EMBOSSER
1—84" Hudson Sharp Toilet Embosser. Spare engraved roll.

FELT ROLLS
20 Felt Rolls—Brass covered 8" to 12" diameter.

FLAT SCREENS
1—6 plate Shartle Flat Screen
2—12 Plate Murray Dunbar Flat Screens
2—14 plate Sandy Hill. (Never used.)
6—12 plate IMPCO Flat Screens.

FRICTION CALENDERS
2—30" Waldron.
2—38" Waldron.

HYDRAULIC PRESS
1—Watson-Stillman Co. (Platen 24" x 24").

JORDANS
2—Noble and Wood—Mammoth Type.
1—Emerson Jordan—25 to 30 tons capacity —iron plug including new spare iron plug.

MISCELLANEOUS
1—Caustic Mixer

MOTORS
2—5 h.p. ball bearing—splash proof motors —3/60/440, 1160 r.p.m.
1—¼ h.p. ball bearing—splash proof gearhead motor—3/60/440, 1725 r.p.m.
1—2 h.p. ball bearing—splash proof gearhead motor—3/60/440, 1725 r.p.m.

PRESSES
4 Sections of presses approximately 24" diameter. Rubber and Bronze.

PRESS ROLLS
Various sizes.

PRINTING MACHINE
1—3 color 40" Rotary Cottrell Printing Machine, A-1 condition, provision for 2 more colors.

PULLEYS
Various cone and assorted pulleys.

PULPERS
1—Jones Pulper. Complete with motor and drive.
1—Noble & Wood Pulper—Iron Tub.

PUMPS
2—Weil Pump Co.—100 g.p.m.—100 P.S.I. including 15 h.p. motors (new equipment).
1—Bell & Gossett—300 g.p.m.—120' head—including 15 h.p. motor.
1—Goulds Sump Pump—50 g.p.m.—20' head —including motor.
Various sizes of Centrifugal and Plunger Pumps. Write us regarding your particular requirements.

REEL
1—72" Beloit Reel.

ROLLS
500—Brass tube-steel tube—rubber covered iron rolls—various sizes

ROTARY SCREENS
1—#2 Bird Rotary Screen.
1—#2A Bird Rotary Screen.

SAVEALLS
1—Saveall—48" diameter x 84" cylinder mold.
3—Pusey & Jones Savealls. Cylinder molds 42 x 146, anti friction bearings, including rubber covered couch rolls.

SCREEN PLATES
40 Plates cut .010.
10 Plates cut .008.
Also other sizes and cuts in stock

SHEETER
1—138" Moore & White Sheeter, duplex, with layboy.
1—74" Downingtown Duplex.

SLITTERS AND WINDERS
1—50" Cameron—Type 24-2L.
1—42" Cameron—Type 40-4-B.
1—42" Cameron—Type 24-3A.
1—42" Cameron—Type 9-3.
1—42" Cameron Constant Tension with pneumatic control.
1—62" Cameron—Type 6 (Shear cut).
1—115" 2 drum Waldron

SQUEEZE ROLL
1—Rubber Squeeze Rolls, 20¾" diameter x 102" face.

STOCK PUMPS
1—10 x 20 Shartle Duplex.
2—7 x 16 Sartle Duplex.
Numerous other Centrifugal Stock Pumps Advise us to your requirements.

SUCTION BOXES
5—Suction Boxes, 82" drilled face x 6" wide.

SUCTION COUCH ROLL
1—24⅞" diameter x 160" drilled face.
1—Sandusky 14⅞" diameter x 103" drilled face.

SUCTION PRESS ROLL SHELL (Only)
1—29¾" diameter x 134" drilled face.

SUPERCALENDER STACK
1—54" 9 roll supercalender stack, completely rebuilt including motors, etc.

TABLE ROLLS
40—Table Rolls 82" face x 3" diameter.

TOILET and TOWEL MACHINES
2—Dietz 81" Toilet & Towel Machines.

TRIMMER
1—56" Smith & Winchester—Undercut.

TUNNEL DRYERS
2—Proctor & Schwartz Tunnel Dryers, 10 ton and 5 ton capacity.

TURBINE
1—150 h.p. Westinghouse Type C-Gear Turbine (Recently rebuilt).

VAT
1—Iron end Vat only, for decker or saveall, suitable for cylinder mold 36 x 130.

YANKEE DRYERS
1—8 diameter x 178" face
3—Yankee Dryers 84" diameter x 52, 53 and 62" face.

We are always in the market to purchase your surplus or idle machinery. What have you to offer?
Wanted Cylinder and Fourdrinier Machines (complete mills).

Paddy Ross, Pres. **J. J. ROSS COMPANY** **Ben Kurs, Treas.**

250 Frelinghuysen Ave. **Tel.—Bigelow 3-3720** **Newark 5, N. J.**

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ROSS PAPER MACHINERY CO.

245 PASSAIC STREET
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NEW, USED, REBUILT PAPER AND PULP MACHINERY

AMERICA'S LARGEST BUYERS OF PAPER MAKING MACHINERY

ANILINE PRESS
1—New Lockport 4 color Aniline Press.

BEATERS
2—Valley Iron 750 lb. Iron Tub—Bronze filled.

BLOWERS
5—Blowers and Mill Exhausters

CALENDER ROLLS
46 Chilled Iron Rolls—Assorted sizes.

CALENDER STACKS
1—104" face 5 roll stack, with drive
1—76" face 7 roll with drive.
1—78" face 3 roll with drive.
1—112" face 7 roll.
1—62" face 5 roll Sandy Hill.

CONVEYOR
1—18½ ft long x 30" wide—with motor.

CYLINDER MOLDS
1—MPCO 40" diameter x 84" face.
1—36" diameter x 138" face Cylinder molds with vats, couches—ball bearing.
2—74" face x 36" diameter.
1—134" face x 36" diameter, with stainless steel shafts.
1—78" face x 80" diameter.

DRIVES
1—6C. Reeves Drive. 40-50 h.p.—Ratio 4 to 1.
1—Falk 60 h.p. Ratio 13 to 1, R.p.m. 1470-113. Herringbone gears.

DRYERS
2—74" face x 28" diameter with gears.
1—143" face x 48" diameter.
1—124" face x 48" diameter.
1—60" face x 36" diameter.
1—77" face x 48" diameter—with gear.
1—84" face x 50" diameter.
19—78" face x 36" diameter, complete with 2 deck frames, gears, bearings and steam joints. Drives, line shaft and felt rolls are available.
1—78" face x 18" diameter with gears and bearings.
1—120" face x 18" diameter—Baby Dryer.
2—62" face—36" diameter—bearings and gears.
6—90" face x 48" diameter.
95—120" face x 42" diameter.

ELECTRIC PAPER MACHINE DRIVES
1—G. E. 55/110 with G. E. Generator, Exciter and Controller.
1—G. E. 90/100 with G. E. Generator, Exciter and Controller.

EXTRACTOR ROLLS—SUCTION
1—Downingtown—64" face x 17" diameter with bearings & stand.

FLAT SCREENS
1—Montague 6 plate—ball bearing.
1—Sandy Hill 8 plate.

FOURDRINIER SECTIONS
1—P & J 150" x 80 ft. ball bearing. Complete from inlet to 22" diameter suction couch. Brass and Rubber covered table rolls. 6 Brass Suction Boxes operated at 1000' per minute.
1—M & W 32" x 49" complete with 3 suction boxes, shake, 3 suction presses and size press.

HEAD BOXES
1—118" Bronze Lead Lined. Basalt.

INLETS
1—Voith Inlet for 151" wire with 28" slice. Complete, including drive.
1—96" All bronze—adjustable.
1—141" Beloit complete with distributor roll.

JORDANS
2—Jones Standard.
1—Jones Standard—ball bearing
1—#3 Miami, fur motor drive.
1—Jones Majestic, roller bearing—stainless steel filings—fur motor drive.
1—Jones Majestic with base and couplings—bronze filled, 2 sets of new bronze fillings.
2—#3 Appleton with base and coupling—bronze filled.
1—Dillon Horse #3—direct connected 75 h.p. Stainless steel ½" filling.
1—#2 Smith & Winchester—Ball bearing.

LABORATORY EQUIPMENT
1—Cavanaugh 2 roll 12" calender. Steam fitted rolls.
1—16" Coating Machine.

MOTORS
1—Fairbanks Morse — 30 h.p. — 400 r.p.m. — 220/440/3 ph.—60 cycle.
1—Reliance 25 h.p. ball bearing, 850 r., 3 phase, 60 cycle—1730 r.p.m.

PULLEYS
30—Split cast iron tapered Pulleys.

PULP EQUIPMENT
1—Jigger—1 deck—vibrating screen.
1—Nitts & Merrill #17 Pulpwood chipper
1—8" Carthage Disc Barker
1—48" Carthage Ball Bearing Chipper—4 knife.

PULPERS
3—#2 Lamoyo Pulpers—with drives.

PUMPS
44—Centrifugal Pumps, open & closed impellers. Direct connected or Belt Driven. Extended base for motor. Assorted capacities and heads. Most used less than one year. Also new Goulds Pumps.

REELS
2—Beloit 110" two bowl Reel.
1—Beloit 132" two bowl upright reel.
1—Beloit 116" two bowl upright reel.

1—P&J 120" Ball Bearing Fourdrinier Machine. 60" dryers—suction press and suction couch—Spiral Bevel Gear Drives.

1—Pusey & Jones 92" Fourdrinier Machine Complete.

ROLLS—PRESS, COUCH, etc.
32—Press rolls, brass and rubber covered.
14—Couch rolls, brass and rubber covered.
250—Brass and steel carrying rolls.

ROTARY SCREENS
2—Jones Leffswalk—cylinder 84" face x 28" diameter.
1—#2 Leith-walk-ball bearing.
1—#3A Bird with motor. Used less than 1 year.

SCREW PRESSES
3—Valley Voith Screw Presses Size 2A, with new spare sets of plates.

SHEETERS
1—Beloit Duplex 104", complete with drive.
1—Hamblet Duplex—136".
1—Moore & White 64" Sheeter with Moore & White layboys.
1—12 roll Hamblet heavy duty backstand.
1—8 roll heavy duty backstand.

SHREDDERS
1—American 37" Hammermill, anti-friction bearing.
2—Sprout Waldron Cutters — type F-11 — 30" knives. Used 30 days.

SLITTERS & WINDERS
2—Pusey & Jones 100" high speed slitters and rewinders.
1—New 50" Cameron Model 6.
1—Beloit 2 drum 125" with 8 slitters.
1—Langston 60" 21 shear cut slitters. Rewinds to 42" with 5 h.p. 220-440 volt motor.

STUFF PUMPS
1—Shartle 8½x12 Triplex—Silent Chain Drive.

SUCTION COUCH ROLLS
1—Millspaugh 22" diameter x 138⅝" suction face.
1—Millspaugh 22" diameter x 138" drilled face.
1—Beloit 107" drilled face x 22" diameter. Anti friction bearings.
1—Millspaugh—14½" diameter x 93" drilled face.

SUCTION PRESS ROLLS
1—Downingtown 25" diameter x 100" drilled face.
1—Beloit 22" diameter x 105" drilled face for direct drive. Anti friction bearings.

SUPER CALENDER
5—7 roll 42" face.
1—7 roll 60" face.
1—7 roll 50" face.

TRIMMERS
1—60" Seybold Precision with motor and five spare knives.
1—Seybold 74" with motor and five knives.

VACUUM PUMPS
1—H2 Nash for motor drive.

CUT YOUR LIME RECOVERY COSTS

10 to 1 you can cut your lime-recovery costs as much as 50%. Our scientific tests will show actual savings possible. Details on procedure gladly furnished, no obligation. Delay costs you money. Write today.

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Consulting Chemical Engineering Service

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CHESTNUT WET LAP FOR SALE

8 Air Dry Tons per day of pure chestnut wet lap 60% air-dry. Available for immediate shipment. Write for details and sample.

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Bristol, Virginia D-1

REBUILT ELECTRICAL MACHINERY

A.C. & D.C. GENERATORS

1—100 KW West. SK 125 v. 1200 RPM.
125 KVA 220/3/60 277 RPM West.
150 KW Triumph 250 v. sp.wd. 600 RPM.
150 KW G.E. 550 v. 1100 RPM sp.wd.
1000 amp. 60 v. West. SK Generator.
1000 amp. 60 volt Westgh. SK Welding Gen.

M-G SETS—R. CO.

450 KW G.E. 250/125v.—710 HP Syn. 2900/3/60
250 KW West. SK 250 v.—2300 v. Syn.
100 KW West. 125 v. SK—150 HP Ind.
100 KW West. 250 v.—150 HP Syn. 220/440/3/60
35 KW G.E. 125 v.—50 HP G.E.
10 KW 125 v.—15 HP Master 220/440.

AIR COMPRESSORS

1575 CFM. 100 #PRE 2-I.RD. dir. con. 265 HP Syn. 2300/3/60 with 4-step unloader.
755 CFM. Chic. Pneu. two stage Belted. 100 lbs.
365 cfm 100.# Chic. Pneu. 12 x 10 Belted.
245 cu. ft. Ing. Rand belted ERI. 100 lbs.

AC MOTORS (3 ph. 60 cy.)

HP	Make	Wdg	Spd.	Type
500	G.E.	S.R.	450	I M
300	G.E.	S.R.	450	I M
300	West.	S.R.	600	CW
150	G.E.	S.C.	600	I K
150	G.E.	Syn.	600	ATI
150	G.E.	S.C.	695	KT3427Y
150	Westgh.	Syn.	450	3 Brg.
150	West.	S.C.	900	CS
125	West.	Syn.	277	
120	Cr. Wh.	S.R.	290	
100	G.E.	S.R.	450	I M
75	West.	S.C.	865	MS
60	West.	S.C.	1160	CS508
50	A.C.	S.C.	1730	
50	Al.Ch.(new)	S.C.	(Hi-Tore.)1130	
35	G.E.	S.C.	1150	I K
30	Vert. G.E.	S.C.	1150	KT526
30	Al. Ch. (new)	S.C.	(Hi-Tore) 1685	ARH
25	C.Wh.	S.C.	880	SC504
25	550 v. West.	S.C.	1750	CS365
25	Cr.Wh.	S.C.	865	
25	Cr.Wh.	S.R.	580	1218
20	Al. Ch. (new)	S.C.	(Hi-Tore) 1685	ARWHN
20	West.	S.C.	1750	CS343F

HP	Make	Wdg	Spd.	Type
15	West.	S.C.	1750	CS328
15	L.A.	S.C.	3480	Fr. 324
10	West.	S.C.	570	CS5484C
10	West.	S.C.	870	CS6484C
10(6)	West.	S.C.	1200	CS5670C
10	West.	S.C.	1750	CS5271G
7½	Comm.	S.C.	865	P328
7½	West.	S.C.	3440	CS3854Y
5	West.	S.C.	565	CS5448
5	West.	S.C.	150	254
5(2)	West.	S.C.	1200	CS
5/1½	L.A.	S.C.	900/1800	2588
5	Master	S.C.	1125/37	PA
5	Burke	S.C.	420	EM2
3	West.	S.C.	1100	CS
3	West.	S.C.	1750	
2	West.	S.C.	550/1200	CS324
2	550v.West.	S.C.	1750	CS224

AC MAGNETIC STARTERS (3 ph. 60 cy.)
2—700 HP West. 2300 v. Syn. Line Starters.

TRANSFORMERS
6—75 KVA. G.E. 2300v-115/230v.
3—100 KVA G.E. 2300v.—230/460v.
3—150 KVA. G.E. 2300v.—230/460v.

MOORHEAD ELECTRICAL MACHINERY CO. Pittsburgh 19, Pa. • Mayflower 7900

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PROPOSALS

FOR FURNISHING

PAPER AND ENVELOPES FOR THE U. S. GOVERNMENT PRINTING OFFICE

SEALED PROPOSALS will be received until 10 a. m., December 19, 1949, in the room of the Joint Committee on Printing, in the Capitol, Washington, D. C., for furnishing the paper for the public printing and binding, and blank paper and plain envelopes for the use of the Government departments and establishments in the District of Columbia, for the terms of 3 months for paper and 6 months for envelopes beginning January 1, 1950, deliveries to be f. o. b. Government Printing Office Warehouse, or warehouse siding, Washington, D. C. The proposals will be opened in the presence of and the award of contracts made by the Joint Committee on Printing to the lowest and best bidders for the interest of the Government whose bids are in conformity with the requirements of the proposals. The Committee reserves the right to reject any or all bids, or to accept any bid or any part and reject the other part, if, in its opinion, such action would be in the interest of the Government.

Blank proposals containing the instructions, schedule, and specifications may be obtained by addressing John J. Deviny, Public Printer, Washington, D. C.

Contracts will be entered into for supplying the quantities required, whether more or less than the estimates, as provided in paragraph 15 of the proposal for paper and paragraph 13 of the proposal for envelopes.

The approximate estimated quantities set forth in detail in the schedules comprise:

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1,300,000 pounds newsprint paper; 1,765,000 pounds machine-finish book paper; 150,000 pounds English-finish book paper; 1,600,000 pounds offset book paper; 240,000 pounds antique-book paper; 50,000 pounds water resistant (text) book paper; 750,000 pounds supercalendered book paper; 960,000 pounds coated book paper; 1,650,000 pounds mimeograph paper; 490,000 pounds duplicator copy paper; 150,000 pounds U S M O safety writing paper; 4,205,000 pounds writing paper; 767,000 pounds map paper; 225,000 pounds manifold paper; 1,730,000 pounds bond paper; 485,000 pounds ledger paper; 690,000 pounds index paper; 225,000 pounds cover paper; 180,000 pounds manila paper; 250,000 pounds kraft paper; 200,000 sheets gummed paper; 30,000 pounds blotting paper; 40,000 pounds tag board; 15,000 pounds cardboard; 30,000 sheets railroad board; 310,000 pounds wood cardboard; 60,000 pounds tan board; 6,100,000 pounds postal card paper; 25,000 sheets pressboard; 170,000 pounds newsboard; 45,000 pounds binder's board; 80,000 pounds chestnut cover board.

In cases where more than 1,000 reams are called for, proposals will be received for 1,000 reams or more.

ENVELOPES

The approximate estimated quantities set forth in detail in the schedule comprise:

18,600,000 Kraft; 4,900,000 Writing, Chemical Wood, white and colored; 115,000 100% Writing, White, 190,000 25% Bond, White; 310,000 100% Bond, White.

By direction of the Joint Committee on Printing.

JOHN J. DEVINY,
Public Printer.

WASHINGTON, D. C.,
November 21, 1949. D-8

PROPOSALS FOR THE SALE OF UNSORTED WASTE PAPER.

U. S. GOVERNMENT PRINTING OFFICE,
WASHINGTON, D. C., *November 23, 1949.*

Sealed proposals will be received at this Office until 10 o'clock a.m., December 12, 1949, for the sale of Unsorted Waste Paper which may accumulate at the Government Printing Office during the six months beginning January 1, 1950. The right to reject any and all bids and to waive defects is reserved. Detailed specifications of the estimated quantities to be sold, accompanied by blank proposals and giving regulations with which bidders must comply, may be obtained by addressing

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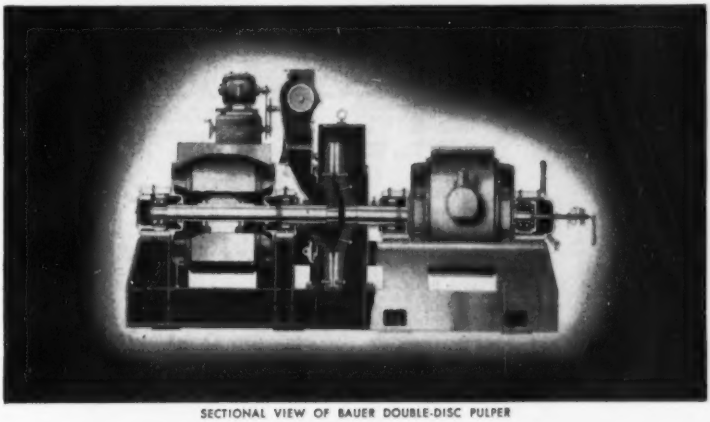

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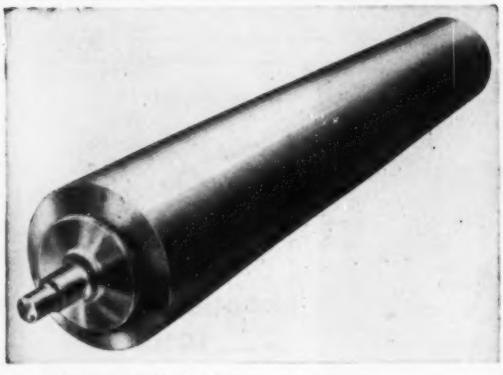

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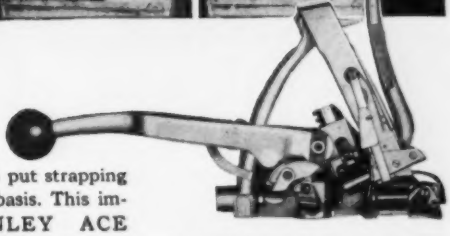

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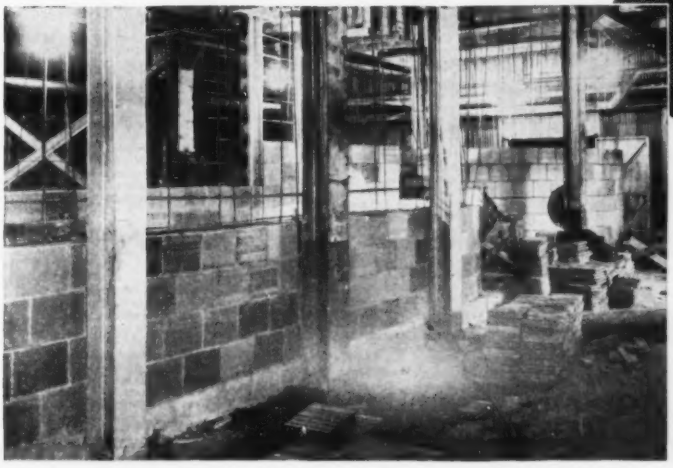

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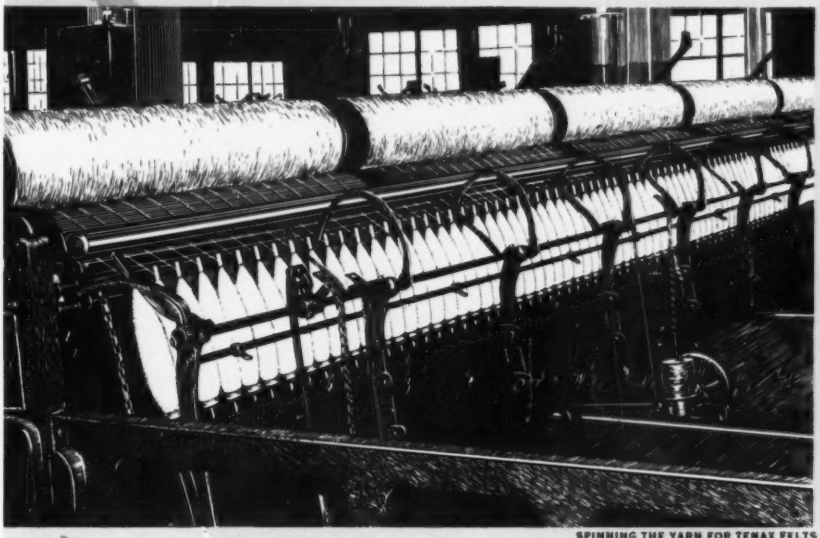

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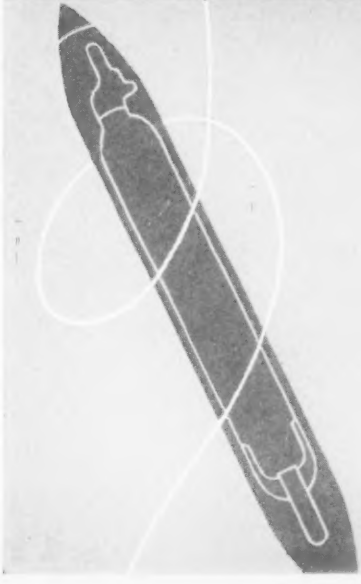

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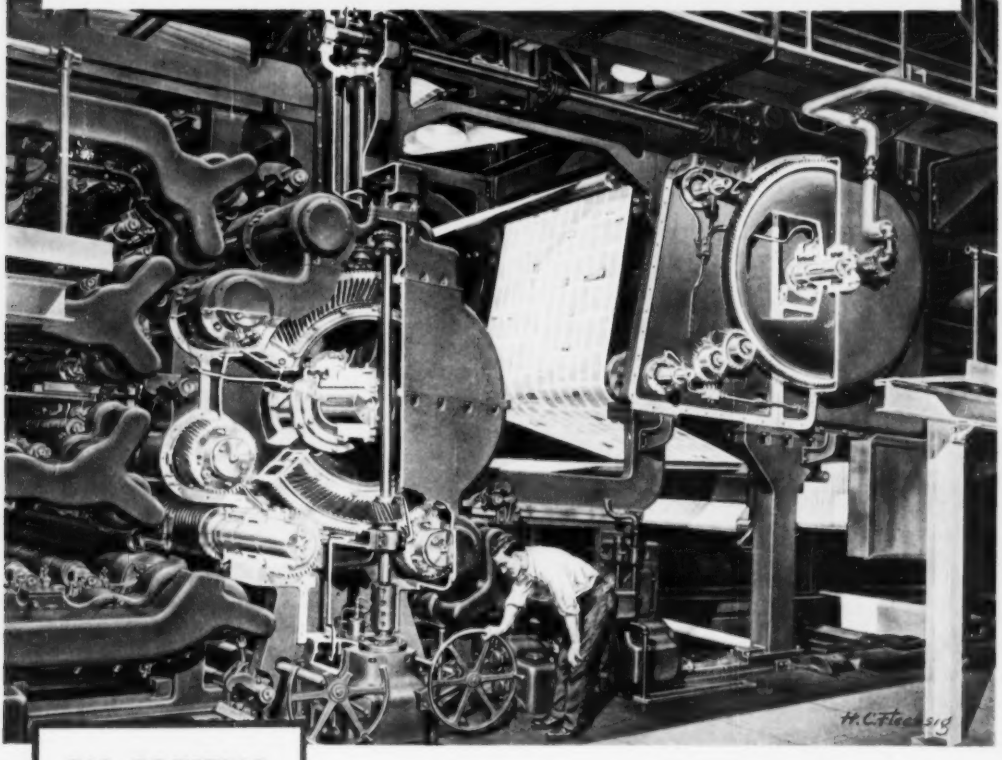

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